Re-Accreditation Report

Montgomery County Fire and Rescue Service
101 Monroe Street, 12th Floor
Rockville, MD 20850
USA

This report was prepared on August 5, 2013
by the
Commission on Fire Accreditation International
for the
Montgomery County Fire and Rescue Service

This report represents the findings
of the peer assessment team that visited the
Montgomery County Fire and Rescue Service
on June 3 - 8, 2012
and re-visited the department on
June 9 - 12, 2013

Peer Assessment Team
Jeff Farris, Team Leader
Michael Barakey, Peer Assessor
Robert Pease, Peer Assessor
Mike Stallings, Peer Assessor
Steve Girk, Peer Assessor
Karl Ristow, Observer

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EXECUTIVE REVIEW

<u>PREFACE</u>

The Montgomery County Fire and Rescue Service recently received candidate status. On November 15, 2011, the department asked the Commission on Fire Accreditation International (CFAI) for a site visit to determine if it could be recommended for re-accreditation. On March 28, 2012, the CFAI appointed a peer assessment team. The peer team leader approved the department's documents for site visit on May 16, 2012. The peer assessment team conducted an onsite visit of the Montgomery County Fire and Rescue Service on June 3 - 8, 2012. The peer team recommended deferred agency status for the department and the Commission on Fire Accreditation International confirmed that decision on August 1, 2012.

Team leader Jeff Farris and team member Mike Stallings conducted a secondary CFAI assessment of the Montgomery County Fire and Rescue Service on June 9 - 12, 2013. The Montgomery County Fire and Rescue Service submitted written updates and revisions of its self-assessment manual, strategic plan, community risk analysis and standards of cover to CFAI and to the peer assessment team. All documentation was comprehensively reviewed in advance of the re-assessment visit. This documentation represented a significant improvement over the originally submitted documents. The department did not utilize a consultant to assist it with completing the documents required for accreditation.

<u>SUMMARY</u>

The CFAI has completed a comprehensive review and appraisal of the Montgomery County Fire and Rescue Service based upon the eighth edition of the *Fire & Emergency Service Self-Assessment Manual (FESSAM)*. The commission's goals are to promote organizational self-improvement and to award accreditation status in recognition of good performance. The peer assessment team's objectives were to validate the department's self-assessment study, identify and make recommendations for improvement, issue a report of findings and conclude if the department is eligible for an award of accreditation.

The peer assessment team leader followed CFAI processes confirmed during the secondary CFAI assessment through an examination of available data and interviews that the department has appropriately addressed the initial concerns that caused the team not to recommend that the department be re-accredited. The department has now satisfactorily addressed core competencies 2A.3, 2B.1, 2B.5, 2B.6, 2C.1, 2C.5, 2C.6, 3A.1, 3B.1, 5A.1, 5A.7, 5B.3, 5B.8, 5E.1, 5E.4, 5E.7, 5F.1, 5F.7, 5G.1, 5G.10, 5I.1, 5I.4, 5I.6, 5K.1, 5K.6, 7C.1 and the related criterion statement. The Montgomery County Fire and Rescue Service has demonstrated that its self-study accreditation manual, community risk analysis, standards of cover (SOC) and strategic plan meet all core competencies and criteria. The peer assessment team recommends re-accredited agency status for the Montgomery County Fire and Rescue Service from the Commission on Fire Accreditation International.

Montgomery County, Maryland is a 500 square mile jurisdiction bordering Washington, D.C. The county has 19 incorporated municipalities; however, most of its residents live in unincorporated areas. All county residents receive fire, rescue and emergency medical services (EMS) services

through the department. The county has a racially diverse population of about 1,114,000 and in recent years has become a minority majority county with minorities comprising almost 51 percent of all residents. The county's population and building densities range from metro-urban to suburban to rural. Nearly one-half of the county residents reside in single-family detached homes with the remainder of the residents split about equally between townhouses, garden apartments and high-rises.

The county is a regional hub of research and technology as well as home to many federal agencies with over 200 biotech companies and 19 federal research and regulatory agencies. Many large, private companies are headquartered in the county, such as Discovery Communications, Lockheed Martin, Marriott International, Hughes Network Systems and GEICO. The county has no heavy industry and a low to moderate amount of light industry. Retail, commercial and office occupancies are found throughout the urban and suburban areas as well as portions of the rural area.

The fire chief reports to the county executive who delegates much of the day-to-day operations to the county administrative officer. They share open communications with dialogue at least weekly. Communications between the county council and the fire chief follow the chain of command through the county executive initially with direct communications following.

Richard R. Bowers, Jr. served as the fire chief from October of 2008 until April of 2013 when he left the department. Chief Steve Lohr was named as the interim fire chief as of May 1, 2013. Chief Lohr is expected to remain the interim chief for approximately the next 18 months. Then it is likely that a nationwide search will be conducted to fill the position in a full time capacity.

The department's SOC processes have improved since the initial re-accreditation site visit in 2012. The SOC now includes a population density breakdown, defined risk levels for each discipline, fire demand zones, assessment of high and low fire and non-fire risks within each planning zone, critical tasking analysis and performance measures.

Following a detailed assessment and analysis, the peer assessment team believes by consensus that the alarm handling time, turnout time and the travel time for the first-due and effective response force components of the total response time continuum, as identified in the standards of cover, are in line with the expectations identified in the eighth edition of the *FESSAM*. It is clear the department is committed to taking steps to meet the *FESSAM* expectations.

The department has many opportunities for the members to be involved in developing, monitoring and measuring it goals and objectives. Currently the division chiefs, who are second level command positions within the organization, are responsible for tracking the success of their respective programs. During the annual planning process, the executive leaders incorporate new and continued goals and objectives, which are then communicated to the organization.

The department's funding mechanism is both income and property tax based. Directions and guidance for the submittal of the annual budget are provided by the county and adhered to by the department. The county is in receipt of a Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association program. The county is required to submit a balanced budget based upon projected tax revenue.

The department offers a wide range of operational emergency response programs that are commensurate with the fire and non-fire risk in the community. Sufficient response data was

available to verify and validate baseline performance measures for all risk categories responded to by the department.

Preventing the 9-1-1 call is the overarching priority identified in the department's 2012 strategic planning process. The primary benefits of this priority include reducing property damage by reducing the occurrence of fire. The department provides a robust public education and fire prevention initiative titled Safety In Our Neighborhood (SION). The department is preparing to implement a basic fire inspection program that will involve companies from the operations division to facilitate commercial building inspections.

There is a clear understanding that the risk level for firefighters is improved by ensuring more fire safe buildings in the community. The downturn in the economy has affected the department's ability to add more staff to this crucial area; however, the on-duty fire companies received appropriate training and are preparing to supplement the fire prevention and life safety program as well as the public education program.

The county has a well-integrated and coordinated system for emergency preparedness. There are regular multi-jurisdictional planning meetings and exercises to ensure this preparedness is always at a high level of readiness. The county also has a well-integrated and coordinated system for technical rescue and hazardous materials. It provides an excellent program to the citizens and visitors of Montgomery County and the National Capital Region.

The department currently operates from 48 different worksites. The operations division works out of 36 fire/rescue stations along with two rescue squad stations and a 56 acre public service training academy. The department headquarters has moved to a larger space in a newly renovated public safety headquarters shared with police, emergency management and certain Department of Transportation sections.

Frontline apparatus consists of: 34 engines, 16 aerials, 21 basic life support (BLS) units, 18 advanced life support (ALS) units, 6 rescue squads and 8 tankers. A number of specialty units are staffed for response to specific incidents, including: 21 boats, 2 hazardous materials units, 2 medical ambulance busses and support units, 1 mass casualty medical supply pod, 3 air supply units, 2 bomb trucks, support units and a reserve fleet.

The department provides a very robust EMS program, through a sophisticated delivery system comprised of well-trained personnel, using high-quality equipment; responders are certified and compliant with the latest medical protocols and the jurisdiction's continuously evolving policies and procedures. An Urban Area Security Initiative (UASI) grant has provided funding for the department to respond to mass casualty incidents, human-caused or natural disasters and large scale planned surge events. Issues for the department's EMS program revolve around the patient record system not interfacing with a universal system that is recommended by the State of Maryland and a need for the reinstatement of EMS field supervisors. Response performance statements for the three levels of EMS response have been developed since the initial re-accreditation site visit in June of 2012.

The department provides primary aviation response to the Montgomery County Airpark, which is the busiest airpark in the county. The department is equipped for an initial alarm to the airpark with equipment that meets and exceeds the tool compliment for aircraft rescue and fire fighting (ARFF) vehicles outlined in the *National Fire Protection Association (NFPA) 403: Standard for Aircraft*

Rescue and Fire-Fighting Services at Airports. The department also provides a technician level hazardous materials response to the airpark.

Urban Search and Rescue Maryland Task Force 1 is the state's only federally sponsored urban search and rescue team. Initially formed as a local asset for trench collapse incidents, the team has responded to many local and federal emergencies, such as incidents of national significance and natural disasters.

The department's capital improvement program includes the construction of new fire facilities, renovations of existing facilities, a centrally located maintenance facility and a storage warehouse. Fiscal limitations will delay some of the projects, such as the warehouse, for ten years or more. In the past three years, the county has added two new stations and completed the construction of a replacement station for one of its oldest and smallest existing stations. Plans are to add an additional two new stations and to replace another four existing stations. Montgomery County has established a centralized, county-wide maintenance program in a large, leased site. This maintenance facility is fully equipped and operational. Future plans include the addition of two satellite maintenance facilities.

A major issue facing the department regarding physical resources is the need for an electronic department-wide record management system and the need for trained and certified personnel to meet the needs of the expanding fleet maintenance capabilities.

The department places a strong emphasis on achieving a positive employee climate. The department is proactive in addressing work place safety. The fire stations are meticulously maintained and there is a comprehensive apparatus and equipment maintenance program. Together they contribute to a safe, efficient and healthy work environment. The department also promotes physical fitness. All members have access to physical fitness equipment.

The department is, facing financial decisions based on budget constraints. As a result, the department had to eliminate its exercise physiologist position in the medical section. Once funding is available, the department is strongly recommended to restore this valuable position.

The department operates a modern training facility with an abundance of props and equipment to meet all of its training needs. Performance based and objective based training programs are offered regularly to all ranks within the organization. The training facility is an accredited facility by the state and offers numerous initial training and certification programs in addition to all continuing education programs required by the agency.

One major water system serves the majority of the county and is assisted by two additional systems, from an adjoining city and town. The county water system is also interconnected to the Prince George's County water system to further enhance water capabilities. The department has no water system issues after drastic system improvements were made following a department initiated water system study with 100 percent of its recommendations being implemented. The rural areas are served by seven tankers that respond automatically to the predetermined response areas. The department has no hydrant or water system responsibilities; however, it works closely with the three municipal water systems in the county to ensure they are operational. Mutual aid also allows for additional tankers, if necessary; these resources are built into the response alarm protocols. Policies dictate how personnel

are to operate and training is appropriate for personnel success in both water environments i.e., with and without fire hydrants.

The department's communication center is collocated in the public safety communications center with other agencies and is adequately outfitted and staffed. Station alerting is utilized effectively to assign resources to emergency calls. The department has made progress in streamlining the process for dispatching within the last couple of years. The department is currently upgrading the computer aided dispatch (CAD), radio and station alerting systems and will also most likely update the communication center within a couple of years.

The department's support services utilize a combination of uniformed and civilian personnel to provide a variety of functions such as information technology, recruitment, procurement, planning, capital improvement plan support, fleet and facilities management, logistics and self-contained breathing apparatus (SCBA) repair. The department provides the needed support in the areas of administrative support services and continues to implement a centralization program for administrative support personnel.

The department enters into agreements to enhance services provided and received from regional parties and neighboring counties. As a member of the National Capital Region, the department supports the protection of the District of Columbia. The department has also entered into agreements with the Council of Governments (COG) and provides representation on a number of sub-committees as a part of the COG. The department has also entered into agreements with military installations located within the county and the region.

The assessment team identified opportunities for improvement that are captured in the recommendations section and in the observations and performance section of the report. These recommendations flowed from discussions, interviews and a review of department supplied documentation to support its self-assessment conclusions. On the secondary assessment visit there was a demonstrated commitment and effort by everyone in the department that went into addressing the deficient core competencies identified by the peer assessment team from the initial site visit.

 The department is expected to approach the recommendations made by the peer assessment team with serious intention. The recommendations were based upon industry best practices with the dominate portion of the recommendations supporting the incorporation of an SOC process. The team believes these recommendations are achievable by the department within the provided timeframe that will contribute to the continuous improvement process.

The department has made attempts towards maintaining accredited status since the initial accreditation in 2007, as observed by the peer assessment team. The organization has changed accreditation managers several times within the past three years and started to work towards its 2012 reaccreditation during the fall of 2010. The current fire chief, who was appointed to the position in May 2013 and the core personnel within the organization, have indicated that they are passionate about the accreditation process and believe it is the best fire service model available. During the first site visit, it was recommended that the department takes the necessary internal actions to make its accreditation process be a process and not a project.-There is now a stated understanding that the self-assessment is a process and not a one-time project. Continuity is desired in this department and it is believed internally that accreditation will enhance the outstanding department programs.

The county administration and fire chief desire the organization to be an accredited organization for the benefit of the process. The discussions between the two parties lead towards continuous improvement and specifically state accreditation goals and objectives in all formal documents.

It should be noted that the department established a complete residential sprinkler ordinance in 2004 that has proven to be effective and serves as a nation-wide model. The department also actively partners with various research and technology foundations to further the fire service.

Composition

Montgomery County is a 500 square mile jurisdiction bordering Washington, D.C. to the north. The Potomac River forms the boundaries between Montgomery County and both Fairfax and Loudoun Counties in Virginia; the Patuxent River forms the boundary between Montgomery County and Howard County in Maryland. Jurisdictions that border Montgomery County by land include Prince George's, Carroll and Frederick Counties in Maryland.

The county's population and building densities range from metro-urban to suburban to rural. Within Montgomery County lie 19 incorporated municipalities, ranging from less than 1 square mile to 13.5 square miles. The county's largest municipality is Rockville, which is located directly in its center. Most of the county's residents live in unincorporated areas.

Montgomery County has a diverse population of about 1,114,000, an increase of over 200,000 since 2000, including an increasing number of seniors (age 65 and above) and foreign-born residents, many of whom are non-English speaking. The county's racial composition as of 2010 is 49.3 percent Caucasian, 17 percent Hispanic or Latino, 16.6 percent African American, 13.9 percent Asian or Pacific Islander and 3.2 percent other or multiple races; thus making it a minority majority county with minorities comprising almost 51 percent of all residents. The 30-year trend, particularly in the past decade, has been greater percentages of minority residents and a smaller percentage of Caucasian residents.

There are 376,025 housing units within Montgomery County as of 2010; 48 percent of the units are single-family detached, 18 percent are single-family attached (townhouses), 17 percent are garden apartments, and 17 percent are high-rises.

Montgomery County is one of the most affluent counties in the United States, having one of the highest per capita incomes and one of the highest percentages of adult residents having post-graduate degrees. Montgomery County is an important business and research center. It is the epicenter for biotechnology in the Mid-Atlantic region and the Washington D.C. metropolitan area's federal and advanced technology marketplace. The county is home to over 200 biotech companies, 19 federal research and regulatory agencies and has over 100,000 advanced technology workers.

Many large firms are based in the county, including Discovery Communications, Lockheed Martin, Marriott International, Hughes Network Systems and GEICO. The county has no heavy industry and a low-moderate amount of light industry. Numerous retail, commercial and office occupancies are found throughout urban and suburban areas as well as portions of the rural area.

<u>Government</u>

Council-Executive form of government
County Executive and nine Council Members
County Administrative Officer
Fire Chief

<u>Fire Department</u>

34 fire-rescue stations and two rescue stations
1,155 certified career firefighter-rescuers (three shift system)
880 certified volunteer firefighters and EMS providers
126 civilian employees

<u>Frontline Apparatus</u>

34 engines (27 with ALS first-responder capability)
21 ambulances (BLS)
18 medic units (ALS)
16 aerial units (1 with ALS first-responder capability)
15 brush units
8 water tankers (3,000-3,500 gallons each)
6 heavy-rescue squads
Specialty units: hazardous materials; bomb squad; swift water and ice rescue; collapse, confined space and technical rescue; mass casualty; air support; ambulance bus; and mobile command post.

CONCLUSIONS

The self-study manual produced by the Montgomery County Fire and Rescue Service was of high quality.

- The Montgomery County Fire and Rescue Service demonstrated that all core competencies were met and received a credible rating.

- The Montgomery County Fire and Rescue Service demonstrated that all applicable criteria were met and received a credible rating.

- The peer assessment team recommends re-accredited agency status for the Montgomery County Fire and Rescue Service from the Commission on Fire Accreditation International.

RECOMMENDATIONS

The peer assessment team conducted an exit interview with the agency consisting of the fire chief, the staff officers and administrative support staff that participated in the self-assessment study. The purpose of the meeting was to review the team's findings and recommendations. The department was given an opportunity to respond to any errors in findings of fact.

Strategic Recommendations

Strategic recommendations were developed and updated from information gathered from the onsite assessment visit and the secondary assessment and the evaluation of the criteria and core competencies.

The following strategic recommendations made since the initial site visit have been satisfactorily addressed. They include:

It is recommended that the department takes the necessary internal actions to make its accreditation process be a process and not a project.

- *The new fire chief and his core staff personnel have been very open with support of the accreditation process as an ongoing process and not a one-time project.*

Category II – Assessment and Planning
Criterion 2A: Documentation of Area Characteristics

Core Competency

2A.3   The agency analyzes the community by service area/population density for the purpose of developing total response time standards.

It is recommended that the department enhance its utilization of population density analysis to include all necessary categories as defined by CFAI to develop total response time standards.

- *The department has successfully implemented population density data for analyzing risk and response goals.*

Criterion 2B: Fire Risk Assessment and Response Strategies
Criterion 2C: Non-Fire Risk Assessment and Response Strategies

Core Competencies

2B.1   Each planning zone and population area is analyzed and risk factors are evaluated in order to establish a standards of cover.

2C.1   Each planning zone and population area is analyzed and non-fire risk factors evaluated in order to establish a standards of cover.

It is recommended that the department fully assess contributing factors to fire and non-fire risks to develop an effective standards of cover strategy.

- *The department's standards of cover and community risk analysis effectively assess fire and non-fire risks from which response strategies have been developed.*

Criterion 2D: Strategic Planning

Core Competency

2D.1 The fire service agency has a published strategic plan.

It is recommended that the department regularly utilize the standards of cover and incorporate its language into the master planning process.

- *The department incorporates the standards of cover in the daily operations and will include the language in the next master planning update process per the governing body.*

Category V – Programs
Criterion 5A: Fire Suppression

Core Competency

Note: The wording in this core competency is similar for all program areas referenced in the recommendation.

5A.1   Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, pumping capacity, apparatus and equipment deployment objectives for each type and magnitude of fire suppression emergency incidents.

It is recommended that the department develop five year benchmark performance objectives and actual baseline performance statements, in the 90 percent fractal, for each emergency response discipline i.e., fire suppression, emergency medical services (EMS), hazardous materials, technical rescue, aviation rescue and fire fighting and the bomb squad program, in their associated fire and non-fire risk categories, and report the statements in a format recognized by CFAI.

- *The department has produced benchmark goals and baseline performance data at the 90 percent fractal for all response programs.*

Criterion 5B: Fire Prevention / Life Safety Program

Core Competency

5B.3   The program has adequate staff with specific expertise to meet the fire prevention/life safety program goals and objectives.

It is recommended that the department seek ways to increase staffing to meet the program goals and objectives for the inspection of buildings as outlined in the Montgomery County Fire Safety Code, Section 22-23.

- *The department lost eight uniformed positions within the code enforcement division in 2012. However, the department received approval by the county executive to replace four positions in August 2013 and four more in the balance of FY2014. The department will pursue efforts to replace eight more positions in FY2015. The head of the code enforcement division anticipates that the goals and objectives of the code enforcement division will be met with the civilian positions because they are not required to participate in training or other activities that reduce the amount of time spent on code enforcement activities.*

Criterion 5E: Technical Rescue

Core Competency

Note: The wording in this core competency is similar for all program areas referenced in the recommendation.

5E.4   Current standard operating procedures or general guidelines are in place to accomplish the stated level of response for technical rescue incidents.

It is recommended that the department update, document and make current standard operating guidelines for its technical rescue, aviation rescue and fire fighting and human resources practices.

- *The department has demonstrated that standard operating guidelines for technical rescue, aviation rescue and fire fighting and human resources practices are in place.*

Criterion 5G: Emergency Medical Services

Core Competency

5G.1   Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of emergency medical incidents.

It is recommended that the department examine a staffing model for the EMS Section to enhance supervisory and managerial functions of field personnel.

- *The department was able to secure funding within the FY14 budget to reinstitute one EMS duty officer position, which was implemented July 14, 2013.*

<u>The following strategic recommendations made since the initial site visit have not been fully addressed. They include:</u>

Category III – Goals and Objectives
Criterion 3A: Goals and Objectives

Core Competency

<u>3B.1   Some form of organizational management process is identified and used to implement and track the agency's goals and objectives.</u>

It is recommended that the department establish and publish a formal and uniform process to track program goals.

Category V – Programs
Criterion 5A: Fire Suppression

Core Competency

<u>5A.7   An appraisal is conducted, at least annually, to determine the effectiveness of the fire suppression program.</u>

It is recommended that the department further improve its current practices by conducting and documenting a formal appraisal process, at least annually, for its fire suppression, fire prevention and life safety, technical rescue, hazardous materials, aviation rescue and fire fighting and bomb squad programs.

<u>**Specific Recommendations**</u>

Specific recommendations were developed from the appraisal of performance indicators in each of the ten categories and updated from information gathered from the secondary assessment.

<u>**Specific recommendations satisfactorily addressed since the time of the initial site visit include:**</u>

Category II – Assessment and Planning
Criterion 2A: Documentation of Area Characteristics

Performance Indicators

2A.2   <u>The agency organizes the community into geographic planning zone(s) for purposes of analyzing service provision.</u>

It is recommended that the department create smaller geographic planning zones to enhance its analysis capabilities.

- *The department utilized over 850 fire demand zones for analytical purposes and has demonstrated the capability to analyze individual demand zones, or combinations of demand zones, depending on the data needed.*

Criteria 2B and 2C: Fire and Non-Fire Risk Assessment and Response Strategies

Performance Indicators

2B.2   <u>The frequency and probability of occurrence of fire suppression service demands are identified in each planning zone.</u>

2C.2   <u>The frequency and probability of occurrence of service demands other than fire are identified in each planning zone.</u>

It is recommended that the department create a model that allows for all risk categories to be assessed at the fire management zone level for frequency and probability.

- *The department has divided the service area into 856 risk management zones (RMZ) built upon existing box and metro assignments. The agency is now able to evaluate response performance and service demands in each of these RMZs for the purpose of risk management and service enhancement.*

2B.3   <u>The maximum or worst fire risk(s) in each planning zone is/are identified and located, i.e., hazards that require the maximum amount of fire protection resources or that would result in the greatest loss of life or property; the key or special hazard risk in each planning zone is identified and located, i.e. hazards, which if destroyed would be a critical or essential economic loss to the community(this also could include cultural, environmental, or historical loss); the typical or routine risks in each planning zone are identified, i.e., those risks most common to the planning zone; the remote or isolated risks in each planning zone are identified, i.e., those risks most distant from other risks as to be almost unique to the planning zone; and/or other locally adopted equivalencies are utilized to identify fire risk.</u>

2C.3   The maximum or worst non-fire risk(s) in each planning zone is/are identified and located; the key or special hazard risk in each planning zone is identified and located, i.e., hazards, which if destroyed would be a critical or essential economic loss to the community (this could also include cultural, environmental, or historical loss); the typical or routine non-fire risks in each planning zone are identified, i.e., those risks most common to the planning zone; the remote or isolated non-fire risks in each planning zone are identified, i.e., those risks most distant from other risks as to be almost unique to the planning zone; and/or other locally adopted equivalencies are utilized to identify non-fire risks.

It is recommended that the department identify the worst, special, typical and remote and isolated fire and non-fire risks in each planning zone.

- *The department has divided the service area into 856 RMZ built upon existing box and metro assignments. The agency is now able to evaluate response performance and service demands in each of these RMZs for the purpose of risk management and service enhancement.*

2B.4   A critical task analysis of each risk category and/or fire incident is conducted to determine the effective response force (ERF).

2C.4   A critical task analysis of each risk category and/or non-fire incident is conducted to determine the effective response force (ERF).

It is recommended that the department establish and utilize critical tasking in the standards of cover model to further enhance its matching of resources to risks.

- *The department now has in place critical task analyses for fire and non-fire incidents, including fire suppression, emergency medical services (EMS), hazardous materials, water rescue, technical rescue, explosive devices and aviation rescue and fire fighting and has incorporated critical tasking within the standards of cover.*

Category III – Goals and Objectives
Criterion 3A: Goals and Objectives

Performance Indicators

3A.2   The agency establishes goals for each operational program with corresponding specific objectives that incorporate the measurable elements of time, quantity and quality.

It is recommended that the department establish, publish and utilize metrics for all programs within the department to further increase the programs' successes and to align with the department's master plan recommendations.

- *The department has established and published a goals and objectives document that contains 13 master plan goals and program goals and objectives for community outreach, fire suppression, emergency communications, emergency medical services, special operations, fire code compliance, investigations and mobile volunteer corps*

Criterion 3B: Implementation of Goals and Objectives

Performance Indicator

3B.2   The agency's goals and objectives are disseminated to all members of the organization.

It is recommended that the department publish and communicate goals and objectives that are uniform for all levels of the organization.

- *The department has published and communicated the goal and objectives document that is available to all members.*

Specific recommendations made during the initial site visit that have not yet been addressed include:

Category II – Assessment and Planning
Criterion 2A: Documentation of Area Characteristics

Performance Indicator

2A.4   Data including fire loss, injury and life loss, property loss, and other associated losses, are recorded for a minimum of three immediately previous years.

It is recommended that the department consolidate all fire loss assessment into the standards of cover and improve its current processes concerning fire loss through periodic appraisals and training.

2A.6   Significant economic indicators used in the planning effort are identified (e.g., revenue sources, local economic factors, insurance evaluations, and assessed valuation of various components).

It is recommended that the department incorporate additional economic indicators other than that of Insurance Service Office (ISO) into the standards of cover.

Category III – Goals and Objectives
Criterion 3B: Implementation of Goals and Objectives

Performance Indicator

3B.2   The agency's goals and objectives are disseminated to all members of the organization.

It is recommended that the department publish and communicate goals and objectives that are uniform for all levels of the organization.

Category V – Programs

Criterion 5F: Hazardous Materials (Hazmat)

Performance Indicator

5F.2   The agency defines and provides appropriate and adequate equipment to accomplish the stated level of response for hazardous materials response and to be compliant with local, state/provincial and national standards.

It is recommended that the department recover the cost of consumables used on the scenes of hazmat incidents.

Criterion 5G: Emergency Medical Services (EMS)

Performance Indicator

5G.9   The agency's information system allows for documentation and analysis of the EMS program.

It is recommended that the department develop a process to retrieve patient outcome data from the area receiving hospitals in an effort to facilitate the retrieval of data that helps to track the effectiveness of provider interventions.

Category VI – Physical Resources
Criterion 6D: Apparatus Maintenance

Performance Indicators

6D.3   A system is in place to ensure the regular inspection, testing, fueling, preventive maintenance, and emergency repair for all fire apparatus and equipment.

It is recommended that the department continue to seek and implement technology to provide department-wide records management for collecting and analyzing apparatus and equipment maintenance.

6D.4   An adequate number of trained and certified maintenance personnel are available to meet the program needs.

It is recommended that the department move forward with a staffing model for the fleet section and plan for budgetary allocations to allow the department to have adequate trained and certified personnel to meet its maintenance needs.

Criterion 6E: Tools and Small Equipment

Performance Indicator

6E.4   An inventory control and maintenance tracking system is in place and is current.

It is recommended that the department implement an electronic inventory control system that will allow the analysis of data input and reduce or eliminate dependency on the current mix of differing databases, paper records and other reporting methods.

Category VII – Human Resources
Criterion 7A: Human Resources Administration

Performance Indicator

7A.2   The human resources program has adequate staffing to accomplish the human resources administrative functions.

It is recommended that the department analyze staffing needs to better share workloads and provide for increased efficiencies.

Criterion 7B: Recruiting, Selection, Retention and Promotion

Performance Indicator

7B.2   The agency and its members are part of the recruiting process.

It is recommended that the department assess the human resources assigned to manage, market, and recruit diverse citizens of Montgomery County and surrounding areas.

Criterion 7G: Wellness/Fitness Programs

Performance Indicator

7G.3   The agency provides wellness/fitness education to all employees/members.

It is recommended that the department assess the need for an exercise physiologist who can educate, develop programs, monitor performance and coach its members to maintain fitness.

OBSERVATIONS

Category I — Governance and Administration

The Montgomery County Fire Rescue Service operates within a county council-executive form of government. The fire chief reports to the county executive with much of the daily operations being delegated to the county administrative officer. The county council is comprised of nine members that are elected from districts and at-large seats. Once elected, they serve a four year term.

The governing body and the agency manager are legally established to provide general policies to guide the department's approved programs and services and appropriated financial resources. The department is legally established under the appropriate county charter to ensure adequate public safety, health and welfare for the citizens of Montgomery County. The Office of Human Resources has established job requirements for the department's fire chief position. Policies are in place that prevents conflicts of interest.

The charter provides the fire chief with the responsibility to deliver services through a cooperative partnership between local fire and rescue departments and employees of the division of fire rescue services.

The established organizational structure provides an environment for achievement of the agency's mission, purpose, goals, strategies, and objectives. The fire chief leads the membership who staff four divisions and sub-sections that support the department and deliver service to the public. The department has altered its administrative organization to deal with declining funding.

The department operates in compliance with, and under the guidelines of, Montgomery County Code Chapters 21 and 22. Each section works to also ensure it is in compliance with relevant state and federal regulations.

Category II — Assessment and Planning

The Montgomery County Fire and Rescue Service has an adequate assessment and planning process that aligns the results of the self-assessment process and the community risk hazard analysis as it relates to the standards of cover (SOC). The baseline and benchmark statements in its self-assessment document are consistent with what is written in its SOC. Its fire risk assessment analyzes all data to establish the baseline and benchmark for an effective response force (ERF) in its SOC.

During the first site visit it was identified that three criterion statements and seven core competencies were not met: criterion statements 2A, 2B and 2C; and core competencies 2A.3, 2B.1, 2B.5, 2B.6, 2C.1, 2C.5 and 2C.6. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department collects and analyzes data specific to the distinct characteristics of the community served and applies the findings to organizational planning. Core competency 2A.3[1] is now being

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[1] 2A.3   The agency analyzes the community by service area/population density for the purpose of developing total response time standards.

met. The first peer assessment team recommended that the agency create and analyze smaller geographic areas (fire demand zones) to properly assess similar risks.

The department has divided the service area into 856 risk management zones (RMZ) built upon existing box and metro assignments. The agency is now able to evaluate response performance and service demands in each of these RMZs for the purpose of risk management and service enhancement.

The peer assessment team also recommended that the department enhance its utilization of population density analysis to include all necessary categories as defined by CFAI to develop total response time standards. The service area of the county has now been determined to be comprised of metropolitan, urban, suburban and rural population densities. The department uses a computer based model that analyzes and projects its response time performance for a six month period.   A daily report is produced by the data analyst and sent to the battalion chiefs that shows turnout times and response times by shift and by station. The report indicates if the 90 percent baseline times, as identified in the SOC, are being met.

The department does not assess all loss data for a minimum of three years. It is recommended that the department consolidate all fire loss assessment into the standards of cover and improve its current processes concerning fire loss through periodic appraisals and training.

The verified economic indicators utilized by the department are that from the Insurance Services Office (ISO). It is recommended that the department should incorporate additional economic indicators other than that of ISO into the standards of cover.

The department assesses the nature and magnitude of the hazards within its jurisdiction and develops appropriate response coverage strategies. Each significant fire and non-fire risk is categorized and listed to permit future analysis and study in determining standards of cover and related services. Special attention is paid to identify, analyze and develop strategies for non-fire or limited fire risks that gain importance due to cultural, economic, environmental or historical value.

The departments SOC process includes consideration from local needs and circumstances, industry standards and best practices adopted from the following: *Commission on Fire Accreditation International (CFAI) Fire & Emergency Service Self-Assessment Manual, eighth edition; CFAI Standards of Cover, fifth edition; National Fire Protection Association (NFPA) 403 Standard for the Aircraft Rescue and Firefighting; NFPA 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems; NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments; NFPA 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*: the Fire Protection Research Foundation and National Institute of Standards and Technology (NIST).

The department collects socioeconomic indicators, fire loss data, water supply and built-in protection system information and since the time of the first site visit it now incorporates this information into its response coverage strategies. Appropriate resources are sent to reported fires.

Core competency 2B.1[2] and 2C.1[3] are now being met. The peer assessment team was able to verify and validate during the secondary assessment that the standards of cover for fire and non-non-fire risks involves analysis of risk factors associated with population, building types, and other demographics. The agency's SOC document provided clarity in its risk assessment process, which was thorough and credible.

Core competencies 2B.6 [4] and 2C.6[5] are now being met. It was recommended during the first site visit that the department fully assess contributing factors to fire and non-fire risks to develop an effective standards of cover strategy. The department's standards of cover and community risk analysis now effectively assess fire and non-fire risks from which response strategies have been developed.

The second re-accreditation visit validated the department's assessment and planning process, used to develop its SOC, includes geospatial characteristics of the service area, transportation networks, climatic inputs, development and population growth, population demographics, service demands and work load, personnel resources, services delivered, fire flow requirements, target hazards and probability. The results of this commitment have produced a comprehensive and effective SOC for the department to use throughout this process in the development and sustainment of an effective service delivery plan to ensure the safety of the residents and visitors of the county

In the development of the SOC, careful consideration was also given to the non-fire risks in the community. The non-fire risks include technical rescue, hazardous materials, emergency medical services (EMS), aviation rescue and fire fighting and explosive device incidents.

The peer assessment team was able to verify and validate during the secondary assessment that the department now uses a more formal process to periodically assess the balance between fire suppression capabilities and fire risks in the service area. Also, the department is now differentiating its concentration based on the level of risk.

The department's practice is to document dispatching as the time interval from when the alarm is acknowledged at the communication center until the end of the transmittal of the response information via electronic means to the responding apparatus, which marks the end of alarm handling time.

Core competencies 2B.5[6] and 2C.5[7] are now being met. Following a detailed assessment and analysis, the peer assessment team believes by consensus that the alarm handling time, turnout time

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[2] 2B.1   Each planning zone and population area is analyzed and risk factors are evaluated in order to establish a standards of cover.

[3] 2C.1   Each planning zone and population area is analyzed and non-fire risk factors evaluated in order to establish a standards of cover.

[4] 2B.6   Given the fire risk(s), area of responsibility, demographics, economic indicators, fire loss data, water supply and automatic fire protection system information, an effective standards of cover strategy is established.

[5] 2C.6   Given the importance and magnitude of service demands, a standards of cover strategy is established for each type of non-fire risk(s) and service demand.

[6] 2B.5   Agency baseline and benchmark total response time objectives for fire response conform to industry best practices as prescribed on pages 70-71 for first due and effective response force (ERF).

[7] 2C.5   Agency baseline and benchmark total response time objectives for non-fire incident response conform to industry best practices as prescribed on page 71 for first due and effective response force (ERF).

and the travel time for the first-due and effective response force components of the total response time continuum, as identified in the standards of cover, are in line with the expectations identified in the eighth edition of the *Fire & Emergency Service Self-Assessment Manual (FESSAM).* It is clear the department is committed to taking steps to meet the *FESSAM* expectations.

The second site visit verified that the agency has taken and continue to enact steps to reduce the alarm handling and turnout time performance.

- The emergency medical dispatch (EMD) program utilized by the emergency communications center has dispatchers querying the caller for additional information before the dispatch is made. The department is seeking ways to streamline that process or, in certain situations depart from it, when it is apparent that the incident mandates rapid deployment of resources.

- There is also an effort to replace the dispatchers with qualified civilian dispatchers that will be overseen by uniformed members.

- The agency is working towards reducing its turnout time performance that it believes is in part due to faulty data and member education. When data is analyzed for full box assignments it is shown that the department's turnout time performance is much better.

- The process used to report companies enroute and completing their turnout utilizes mobile data computer (MDC) or radio communications. Issues of MDC reliability and radio traffic result in erroneous turnout times or incomplete data. Supporting this is that the agency's travel time performance is within credible expectations.

- The team validated that the agency efforts has resulted in positive effects from its efforts to correct previous pick-up to dispatch performance. Alarm handling baseline performance at 90 percent for full fire assignment in metro communities improved as follows: 2010 – 4 minutes; 2011 – 3 minutes and 10 seconds; 2012 – 3 minutes; and 2013 1st and 2nd Quarters – 2 minutes and 50 seconds. For ALS1 incidents the baseline performance in metro communities improved as follows: 2010 – 4 minutes; 2011 – 3 minutes and 30 seconds; 2012 – 3 minutes and 20 seconds; and 2013 1st and 2nd Quarters – 3 minutes and 10 seconds.

Still, the agency is aware that there remains much room for improvements by its uniformed members as increased turnout times are evident for EMS calls. The leadership is looking at improving communications to line personnel emphasizing the importance of their turnout performance and ensuring this message is carried down to personnel as other means of improvements are evaluated.

A 2005 master plan (ten-year) and FY2013 strategic plan are in place and, along with the budget, are guiding the activities of the agency. The master plan is submitted to the Montgomery County Council for adoption on a ten year cycle and the annual strategic plan is internally adopted.

An exemplary planning process is in place that aligns the progress of strategic plan and the ten year master plan. The executives meet monthly to review progress on the implementation of its annual strategic plan and to identify any necessary adjustments. They also meet annually, typically in April, to create a strategic plan to address the master plan objectives. The process culminates in a proposal

that is appropriate, acceptable and affordable as it relates to the identified needs of the community. This has allowed the fire department to gain influence and improved access to the county government. The department's plans are accessible to its members through the county intranet.

The creation and use of an acceptable standards of cover has provided an important opportunity for improvement to the department's overall planning process. It was recommended during the first site visit that the department regularly utilize the SOC and incorporate its language into the master planning process. The department now incorporates the standards of cover in the daily operations and will include the language in the next master planning update process per the governing body.

Category III — Goals and Objectives

The Montgomery County Fire Rescue Service ensures master plan goals and objectives are established and approved through a county-mandated performance management tool utilized by the county's performance management office i.e., CountyStat and the fire chief's Headline Measures, key departmental goals that are reported periodically to the county executive's office. The department does a good job of ensuring that progress is made on these high level objectives. The department currently appraises all internal plans and programs at the executive level with various tools and systems. The department has been largely successful in completing goals and objectives to better align with its mission, goals and objectives to ensure that they are consistent with council priorities. Objectives that are no longer useful or relevant are modified when the strategic plan is updated for the next fiscal year.

During the first site visit it was identified that two criterion statements and two core competencies were not met: criterion statements 3A and 3B; and core competencies 3A.1 and 3B.1. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department has established general goals and specific objectives that direct its priorities in a manner consistent with its mission. The goals and objectives are appropriate for the community served. On an annual basis, the department develops goals and related objectives that incorporate some measurable elements. In some cases they are a continuation of the previous year and, in most cases, they are aligned with identified needs in the department's master and strategic plans.

The first site team recommended that the department establish, publish and utilize metrics for all programs within the department to further increase the programs' successes and to align with the department's master plan recommendations. Since that time, department has established and published a goals and objectives document that contains 13 master plan goals and program goals and objectives for community outreach, fire suppression, emergency communications, emergency medical services, special operations, fire code compliance, investigations and mobile volunteer corps.

The department has a defined management process to implement the goals and objectives. Division chiefs and section chiefs are responsible for drafting appropriate goals for their respective areas of responsibility. These draft goals and objectives are then rolled up by the planning section manager and subsequently reviewed and approved by the fire chief. The goals and objectives, and the progress towards their implementation, are not readily available to all members of the department. The division chiefs also use a different process to implement and track their respective program goals

and objectives. It is recommended that the department establish and publish a formal and uniform process to track program goals.

The goals and objectives are disseminated among the chiefs in the organization, but are not sent to all the personnel within the programs. It is recommended that the department publish and communicate goals and objectives that are uniform for all levels of the organization.

Processes are in place to measure and evaluate progress towards the completion of specific objectives and overall system performance. The goals and objectives are re-examined and modified periodically. The annual strategic plan addresses the departmental objectives to accomplish the highest priorities within the master plan. The fire chief reviews and approves updates, developed by division chiefs and the department's planner, that identify progress towards completion of the objectives. Their successful completion is a key component of the performance agreement between the fire chief and the county executive.

Category IV — Financial Resources

The county's Office of Management and Budget is responsible for monitoring and managing the budget on a county-wide level. Additionally the Finance Department and Office of Procurement are involved in the county's financial planning. The Montgomery County Fire Rescue Service complies with the county's budget procedures and guidelines and submits annual budget requests for each coming budget year.

Financial planning and resource allocation is based on agency planning involving broad staff participation. The county has an established budget process managed by the Office of Management and Budget. The department adheres to the directions of this office as it submits its annual budget requests. Revenue to fund the operating budget is generated by property and income taxes. Capital improvement projects are funded by bonds with property taxes repaying the debit service.

The department has an internal process that enables it to complete its work on the budget and meet the county-wide guidelines. Division chiefs suggest changes to the budget, which are prioritized and based upon the overall needs of the department; the changes are either included in the budget or placed on hold until a mechanism for funding is identified. The department follows the policies and guidelines of the county in submitting these requests.

The department's financial management practices exhibit sound budgeting and control, proper recording, reporting and auditing. The peer assessment team confirmed that the county is in receipt of the most currently available Certificate of Achievement for Excellence in Financial Reporting (certificate) from the Government Finance Officers Association of the United States and Canada (GFOA) for its Comprehensive Annual Financial Report (CAFR). The department has submitted its most recent GFOA certificate and CAFR as prima facie compliance with this criterion.

Financial resources are appropriately allocated to support the established organizational mission, the stated long-term plan, goals and objectives and maintain the quality of programs and services. Financial stability is a fundamental aspect of an agency's integrity. The department ensures that programs and services provided can be supported by the necessary fiscal resources using sound budgetary practices.

Resource allocation is addressed through the capital and operating budget processes. In recent years, available funding levels have been reduced and departments have found it necessary to prioritize their needs. The county's Office of Management and Budget establishes funding constraints and determines which additional needs may be funded based on priorities submitted by the county departments. By policy, the county is required to maintain a balanced budget.

Based upon projected revenue, departments submit expenditure budget as part of the county-wide expenditure budget. It is Montgomery County policy to maintain a structurally balanced budget in which ongoing expenditures are funded by ongoing revenue. The annual budget is for the period of July through June. Currently, the department's budget is 85 percent salaries and 15 percent operating expenses.

Category V — Programs

Criterion 5A – Fire Suppression

The Montgomery County Fire Rescue Service is a full-service fire and rescue organization designed to provide essential public safety and emergency services to a community that comprises metro, urban, suburban and rural population densities. To meet the needs of its residents, the department currently comprises over 1,155 career uniformed personnel who work side by side with 880 volunteers and staff 5 battalions, 34 engine companies, 16 ladder companies, 23 basic life support (BLS) transport units, 18 advanced life support (ALS) transport units and 6 rescue squads from 34 fire stations and 2 rescue houses for a total of 36 stations. The pump capacity of all first line Crimson engines have a minimum of 1,500 gallons per minute (gpm), with various reserve engines having a minimum capacity of 1,250 gpm, from a minimum 750 gallon water tank.

The department operates a 3-shift system, as well as a 10 hour Monday thru Friday day-work shift, and has established a minimum staffing benchmark of 278 firefighters per shift, per day which reduces to 246 personnel after 1700 hours due to day-work staffing. When staffing falls below 278 personnel, the department hires back to maintain the minimum staffing. The department maintains a minimum of 3 firefighters per engine and ladder company; however, 27 engines companies and 1 ladder company are staffed with 4 personnel with 1 of the 4 being an ALS provider.

During the first site visit it was identified that one criterion statement and two core competencies were not met: criterion statement 5A and core competencies 5A.1 and 5A.7. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department operates an adequate, effective and efficient fire suppression program directed toward controlling and or extinguishing fires for the purposes of protecting people from injury or death, and reducing property loss. The department has a number of policies and procedures in place to direct fire suppression activities. The safe structural firefighting policy assembles a work force that is sufficient to effectively mitigate building fire emergencies.

The department provides a comprehensive incident management system that is both modular and adaptable. This incident command system is used on all incidents and major events regardless of

complexity. The department is fully compliant with requirements of the National Incident Management System (NIMS) and requirements of the Nation Capital Region Council of Government.

Core competency 5A.7[8] is now being met. The department appraises the effectiveness of the fire suppression program through different mechanisms such as training; however, the agency would benefit from an established process whereby the identified gaps are then carried over into goals and addressed by appropriate mechanisms such as training, funding, or partnerships. The appraisal process for the fire suppression program is now somewhat more effective; however it would benefit by being made formal and inter-connected to all other program area appraisals. It is recommended that the department further improve its current practices by conducting and documenting a formal appraisal process, at least annually, for its fire suppression program.

Core competency 5A.1[9] is now being met. The department's response and deployment standards are based upon the risks levels of low, moderate, high and special found in the standards of cover (SOC) document.   The department's response and deployment standards are also based upon the metro, urban, suburban and rural population densities and the fire demands of the community. Thirty-four fire stations and two rescue stations provide county-wide coverage; department staffing is based upon station location, incident type and frequency. The targeted service level objectives in the standards of cover benchmark statements are based on industry standards and best practices, as identified earlier in this report in Category II – Assessment and Planning. The objectives have been approved by the department and will be included in the next revision of the county's master plan.

Fire-adaptive incidents are low to moderate risk incidents typically requiring the response of a single 3-person or 4-person engine. Fire-full assignments are all high and special risk structure fires.

The department's benchmark service level objectives are as follows:

> For 90 percent of all low to moderate risk fires i.e., fire-adaptive incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, shall be: 9 minutes in metro and urban areas; 10 minutes and 30 seconds in suburban areas; and 15 minutes in rural areas. The first-due unit shall be capable of: providing 400 gallons of water (gpm) through two hand lines; establishing a minimum water supply of 400 gpm for 30 minutes; and initiating command.

> For 90 percent of all high and special risk structure fires i.e., fire-full assignment, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, shall be: 9 minutes in metro and urban areas; 10 minutes and 30 seconds in suburban areas; and 15 minutes in rural areas. The first-due unit for all risk levels shall be capable of: providing 400 gpm through two hand lines; establishing a minimum water supply of 400 gpm for 30 minutes; and initiating command.

> For 90 percent of all high and special risk structure fires, the total response time for the arrival of the effective response force (ERF), staffed with 24-31 firefighters and officers, shall be: 14

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[8] 5A.7   An appraisal is conducted, at least annually, to determine the effectiveness of the fire suppression program.
[9] 5A.1   Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, pumping capacity, apparatus and equipment deployment objectives for each type and magnitude of fire suppression emergency incidents.

minutes and 30 seconds in metro and urban areas; 15 minutes in suburban areas; and 16 minutes in rural areas. The ERF for all high and special risk incidents shall be capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two in-two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. The ERF for high and special risk structure fires will also be responsible for placing elevated streams into service from aerial ladders. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

The department's baseline statements reflect actual performance from FY2010 to FY2013, Quarter 2. The department does rely on the use of mutual aid from neighboring fire departments to provide its effective response force complement of personnel. The department's actual baseline service level performance for structure fire (i.e., fire-full assignment) is as follows:

For 90 percent of all low to moderate risk fires i.e., fire-adaptive incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, is: 12 minutes and 10 seconds in metro areas; 12 minutes and 30 seconds in urban areas; 14 minutes and 10 seconds in suburban areas; and 15 minutes and 40 seconds in rural areas. The first-due unit is capable of: providing 400 gpm through two hand lines; establishing a minimum water supply of 400 gpm for 30 minutes; and initiating command.

For 90 percent of all high and special risk structure fires i.e., fire-full assignment, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, is: 9 minutes in metro areas; 9 minutes and 40 seconds in urban and suburban areas; and 12 minutes in rural areas. The first-due unit for high and special risks levels is capable of: The first-due unit is capable of: providing 400 gpm through two hand lines; establishing a minimum water supply of 400 gpm for 30 minutes; and initiating command.

For 90 percent of all high and special risk structure fires, the total response time for the arrival of the ERF, staffed with 24-31 firefighters and officers, is: 13 minutes and 50 seconds in metro areas; 23 minutes in urban areas; 12 minutes and 10 seconds in suburban areas; and 18 minutes and 50 seconds in rural areas. The ERF for all high and special risk incidents is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two in-two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. The ERF for high and special risk structure fires will also be responsible for placing elevated streams into service from aerial ladders. These operations are done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

It was verified and validated by the peer assessment team that the Montgomery County Fire and Rescue Service did not have sufficient low and moderate risk fires, which required an effective response force to be assembled for FY2010 through FY2013, Quarter 2, to provide reliable data. There are therefore no baseline service level performance statements provided for the effective response force for low and moderate risk fires in this report.

It was verified and validated by the peer re-assessment team that the Montgomery County Fire and Rescue Service demonstrated a trend of improvement in its actual baseline performance for FY2010 through FY2013, Quarter 2.

Fire-Full Assignment – 90th Percentile Times – Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Alarm Handling	Pick-up to Dispatch	Metro	3:20	2:50	3:00	3:10	4:00
		Urban	3:10	3:20	3:00	2:50	4:00
		Suburban	3:10	2:40	3:10	2:50	3:40
		Rural	3:20	3:00	2:50	3:10	3:50
Turnout Time	Turnout Time 1st Unit	Metro	2:20	2:20	2:30	2:30	2:30
		Urban	2:40	2:10	2:50	3:10	2:30
		Suburban	2:30	2:30	2:30	2:20	2:40
		Rural	2:50	2:30	3:00	2:50	3:00
Travel Time	Travel Time 1st Unit **Distribution**	Metro	5:20	5:20	5:10	5:40	5:20
		Urban	5:20	4:40	6:00	7:30	5:20
		Suburban	6:00	6:20	7:10	5:50	5:50
		Rural	8:10	7:30	8:10	5:20	9:00
	Travel Time ERF **Concentration**	Metro	9:10	9:00	8:50	9:30	9:30
		Urban	10:40	11:00	9:20	11:00	11:50
		Suburban	10:30	10:10	11:30	9:50	10:40
		Rural	14:30	14:20	15:50	14:10	13:40
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	9:00	8:20	8:40	9:00	9:30
		Urban	9:40	9:50	9:30	8:40	9:40
		Suburban	9:40	8:40	9:30	9:30	9:50
		Rural	12:00	11:00	11:40	11:50	13:40
	Total Response Time ERF **Concentration**	Metro	13:50	13:00	13:00	13:30	15:30
		Urban	23:00	13:30	17:10	13:30	26:50
		Suburban	12:10	13:00	15:00	16:20	15:50
		Rural	18:50	17:30	19:50	19:00	18:50

Fire-Adaptive Incidents - 90th Percentile Times - Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Alarm Handling	Pick-up to Dispatch	Metro	4:10	3:20	3:40	6:00	4:50
		Urban	4:10	3:00	3:20	5:30	5:20
		Suburban	4:00	3:10	3:40	6:10	5:00
		Rural	4:10	3:10	3:50	5:20	5:20
Turnout Time	Turnout Time 1st Unit	Metro	2:20	2:10	2:10	2:20	2:20
		Urban	2:20	2:10	2:10	2:20	2:20
		Suburban	2:20	2:20	2:20	2:30	2:30
		Rural	2:20	2:20	2:20	2:20	2:30

Fire-Adaptive Incidents - 90th Percentile Times - Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Travel Time	Travel Time 1st Unit **Distribution**	Metro	7:10	7:00	7:00	7:20	7:20
		Urban	7:20	6:50	6:40	7:30	7:50
		Suburban	8:50	8:10	8:40	8:40	9:20
		Rural	10:30	10:20	10:40	10:20	11:00
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	12:10	11:00	11:20	14:50	13:10
		Urban	12:30	9:50	11:00	17:30	14:30
		Suburban	14:10	11:40	13:50	15:20	16:20
		Rural	15:40	14:20	15:40	16:30	16:20

Criterion 5B – Fire Prevention / Life Safety Program

The Montgomery County Fire and Rescue Service relies on the Division of Risk Reduction and Training and the Department of Permitting Services to administer its fire prevention and life safety program.

During the first site visit it was identified that one criterion statement and two core competencies were not met: criterion statement 5B; and core competencies 5B.3 and 5B.8. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department operates an adequate, effective and efficient program directed toward fire prevention, life safety, hazard risk reduction, the detection, reporting, and control of fires and other emergencies, the provision of occupant safety and exiting and the provisions for first aid firefighting equipment. The Montgomery County Fire and Rescue Service, as the authority having jurisdiction, operates under two authoritative documents. The *Maryland State Fire Prevention Code* is primary. This code lays out the minimum acceptable fire safety criteria within the state. It adopts by reference the 2009 editions of the *National Fire Protection Association (NFPA) 1: Fire Code* and *NFPA 101: Life Safety Code®* and applies them to all new buildings with limited exceptions. The Maryland State Public Safety Article provides that the state fire code may not be applied to existing structures and specifically excludes one-and-two family structures. The department is further charged with enforcement of local ordinances promulgated under the Montgomery County Code.

The FCC enforces local and state fire protection laws. The bulk of requirements come from nationally accepted standards, such the NFPA and the International Code Council (ICC), as adopted by the Maryland State Fire Prevention Commission. Local amendments and enhancements of these standards are routinely adopted as executive regulations that apply to local conditions and thus provide improved fire protection and life safety within Montgomery County.

The legislative mandate in the Montgomery County Fire Safety Code requires the inspection as often as may be necessary of all buildings and premises to ascertain and cause to be corrected any condition which would reasonably tend to cause fire or contribute to its spread. However, the enforcement of fire code requirements and fire protection system operation as part of a life safety maintenance program in existing buildings has occurred only in response to specific complaints

received from operations forces or the public. This does not meet the requirements of the county fire safety code, which mandates that all such systems be maintained in good working at all times.

A series of existing building inspections conducted in the 2009 – 2010 time-frame found significant violations in existing buildings and a failure rate approaching 100 percent. A systematic review of hard copy premise files over the last three years found that most occupancies of which there was knowledge, had not been inspected for ten or more years. In some cases, buildings have not been inspected for over 20 years. The only regular exceptions to this record are schools, day cares and group homes, which must be inspected annually as a license condition. In addition, the reduced staffing has already required the agency to delegate the review of fire protection codes, systems and authority to the Montgomery County Department of Permit Services.

Core competency 5B.3[10] is now being met. The department lost eight uniformed positions within the code enforcement division in 2012. However, the department received approval by the county executive to replace four positions in August 2013 and four more in the balance of FY2014. The department will pursue efforts to replace eight additional positions in FY2015. The head of the code compliance section anticipates that the goals and objectives of the code compliance section will be met with the civilian positions because they are not required to participate in training or other activities that reduces the amount of time spent on code enforcement activities.

Core competency 5B.8[11] is now being met. Efforts have been put together to focus on correcting specific identified problems. The department would benefit from its current practice by conducting and documenting an annual formal appraisal process. While the current process for fire prevention is more effective than what is in place for several other programs, there remains room across the board where improvements may be gained. It is recommended that the department further improve its current practices by conducting and documenting a formal appraisal process, at least annually, for its fire prevention and life safety programs.

Criterion 5C – Public Education Program

The Montgomery County Fire and Rescue Service has a long history of fire and life safety education and advocacy within the community. The public education program, titled Safety In Our Neighborhood (SION), falls under the community outreach and public information section, which falls under the office of the fire chief. This section has an overlapping mission of providing a diverse slate of public education and information programs to both its internal and external public and private customers. The program is delivered by a staff that includes three non-uniformed full time personnel, two uniformed full time personnel and one non-uniformed part-time person.

The department has a public education program in place and directed towards identifying and reducing specific risks in a manner consistent with its mission. A combination of National Fire Protection Association (NFPA) statistical analysis, Maryland State Fire Marshal Office statistics, GIS, census data and local statistical analysis are utilized to target specific risks and specific risk audiences. A continual evaluation of specific needs and programs is conducted by utilizing fire

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[10] 5B.3   The program has adequate staff with specific expertise to meet the fire prevention/life safety program goals and objectives.

[11] 5B.8   An appraisal is conducted, at least annually, to determine the effectiveness of the fire prevention program and its efforts in risk reduction.

incident data reports. This analysis facilitated the public education program senior citizen outreach program. The department is in partnerships with many community groups and business entities that support all of the public education programs.

The public education guidelines are in place, or in the review process, which direct portions of the SION public education program. An appraisal is conducted annually to determine the effectiveness of the programs by evaluating the reduction of overall community risks. The Risk Watch program, offered in the school system, also conducts a pre and post-test evaluation that measures before and after program knowledge and the effectiveness of such programs.

Criterion 5D – Fire Investigation Program

When a fire officer on the scene of a fire or explosion is unable to make a determination as to the cause, specially trained personnel from the fire and explosive investigation (FEI) section of the Montgomery County Fire and Rescue Service are requested to conduct the investigation. The FEI section has 1 battalion chief, 2 captains, 9 lieutenants, and 13 investigators. Each investigator has access to a county vehicle equipped with a laptop computer and a compliment of tools, supplies and equipment to perform fire scene investigations.

The department operates an adequate, effective and efficient program directed toward origin and cause investigation and determination for fires, explosions, and other emergency situations that endanger life or property. Montgomery County Code, Chapter 22, Section 22-9, authorizes the fire chief of the agency to investigate every fire and explosion. This authority is delegated in Section 22-6 to fire officials within the county. As a result, every fire officer within the county has the authority to investigate, and is required to report the origin, cause, circumstances and any factors that contribute to the spread of fire. Section staff members have full arrest powers as state police officers; they work closely with the county's police department to complete thorough investigations and to process criminal charges when and where appropriate.

Mandated investigations are conducted by the fire investigators using the *National Fire Protection Association* (*NFPA) 921: Guide for Fire and Explosion Investigations, 2008 edition*. The department utilizes the scientific method involving all investigations related to the cause and origin of fire and explosions. Each investigator has access to a copy of *NFPA 921* and is issued a copy of the fire laws of Maryland.

Although the FEI unit is not staffed to the optimum level for the responsibility of the job assignment, it does have sufficient staffing to meet its program goals and objectives. This is reflected is the department's case closure rate, which currently exceeds the national average.

The standard operating procedures utilized by the department are completed under the guidelines of *NFPA 921* to ensure the scientific method of fire investigation is followed. The department utilizes this guide to ensure all standard operating procedures are compliant with the laws and guidelines for fire cause and determination.

The department undergoes a yearly review of law enforcement data through an evaluation process called CountyStat. The FEI section delivers this data yearly for management review to determine the effectiveness of the program. The data tracks all calls and captures information that reflects the agencies closure rate on fire investigations and conviction rate on cases that are criminal in nature.

Criterion 5E – Technical Rescue

The Montgomery County Fire Rescue Service provides a wide range of technical rescue programs to its residents including, but not limited to: vehicle entrapment, urban search and rescue, high angle, swift water, ice rescue, confined space and trench collapse. Technical rescue teams staff two rescue companies and with a minimum of three personnel for each rescue company. All first-due engine and truck companies have awareness level training. Four of the department's truck companies are considered rescue ladders and provide extrication services. The department is one of 28 national Federal Emergency Management Agency (FEMA) Urban Search and Rescue (USAR) programs with two equipment caches located in a warehouse within the county. The department maintains an extensive vehicle and equipment cache that is utilized to provide a USAR, flat and swift water rescue response.

During the first site visit it was identified that one criterion statement and three core competencies were not met: criterion statement 5E and core competencies 5E.1, 5E.4 and 5E.7. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department operates an adequate, effective, and efficient program directed toward rescuing trapped or endangered persons from any life-endangering cause.

Core competency 5E.4[12] is now being met. The department now provides minimum standard operating guidelines (SOG) to specified technical rescue incidents such as: cave rescue, first response to trench rescue and a specialty team policy. These three SOGs are provided to direct a program that is responsible for high angle, trench, cave, water, collapse and confined space for which program policies are required to be in place and current. These guidelines ensure all members are performing as desired and required.

Core competency 5E.7[13] is now being met. The department now annually appraises the effectiveness of its technical rescue program through monthly team drills, multi-agency exercises and by the special operations chief's continuous evaluation of the various disciplines. The effectiveness of the technical rescue program is also reviewed through after-action reviews after significant events to improve departmental and inter-agency operability. The special operations chief monitors the response of the companies and will modify operations as required.

The department would benefit from its current practice by conducting and documenting an annual formal appraisal process. The current appraisal process for has added room for improvements; the second site visit verified an appraisal process that utilized the Department of Homeland Security grant program where gaps were identified and addressed as part of the grant program strategies and investment justifications. Additionally periodic appraisals resulted from quarterly urban search and rescue (USAR) exercises and performance evaluations. It is recommended that the department further improve its current practices by conducting and documenting a formal appraisal process, at least annually, for its technical rescue program.

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[12] 5E.4   Current standard operating procedures or general guidelines are in place to accomplish the stated level of response for technical rescue incidents.

[13] 5E.7   An appraisal is conducted, at least annually, to determine the effectiveness of the technical rescue program.

Core competency 5E.1[14] is now being met. The department's response and deployment standards are based upon the special risk found in the standards of cover (SOC) document. The department's response and deployment standards are also based upon the metro, urban, suburban and rural population densities and the technical rescue demands of the community. Thirty-four fire stations and two rescue stations provide county-wide coverage; department staffing is based upon station location, incident type and frequency. The targeted service level objectives in the standards of cover benchmark statements are based on industry standards and best practices, as identified earlier in this report in Category II – Assessment and Planning. The objectives have been approved by the department and will be included in the next revision of the county's master plan. The department's benchmark service level objectives are as follows:

For 90 percent of all technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, shall be: 10 minutes in metro and urban areas; 11 minutes and 30 seconds in suburban areas; and 15 minutes and 30 seconds in rural areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all water and ice rescue incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, shall be: 10 minutes in metro and urban areas; 11 minutes and 30 seconds in suburban areas; and 15 minutes and 30 seconds in rural areas. The first-due unit shall be capable of: establishing command; indicating command mode; ensuring that accountability is established; completing victim identification and victim location sheets with any and all information available; and beginning formulation of an incident action plan for resolution of the incident.

For 90 percent of all technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 36 firefighters and officers including the technical response team, shall be 30 minutes in all areas. The ERF shall be capable of: establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills and abilities during technical rescue incidents; and providing first responder medical support.

For 90 percent of all water and ice rescue incidents, the total response time for the arrival of the ERF, staffed with 14 firefighters and officers including the water and ice rescue response team for incidents that do not involve swift water and 19 firefighters and officers including the water and ice rescue response team for incidents that involve swift water, shall be 30 minutes in all areas. The ERF shall be capable of: establishing command and communicating the mode of command in which they are operating in; establishing accountability; completing victim identification and victim location sheets with available information; and formulating an incident action plan for resolution of the incident.

The department's baseline statements reflect actual performance from FY2010 to FY2013, Quarter 2. The department relies on the use of mutual aid from neighboring fire departments to provide its

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[14] 5E.1   Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of technical rescue emergency incidents.

effective response force complement of personnel. The department's actual baseline service level performance for technical rescue is as follows:

For 90 percent of all technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, is: 12 minutes and 50 seconds in metro and urban areas; 14 minutes and 30 seconds in suburban areas; and 16 minutes and 40 seconds in rural areas. The first-arriving unit is capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all water and ice rescue incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, is: 16 minutes in metro areas; 10 minutes and 20 seconds in urban areas; 13 minutes in suburban areas; and 18 minutes in rural areas. The first-due unit is capable of: establishing command; indicating command mode; ensuring that accountability is established; completing victim identification and victim location sheets with any and all information available; and beginning formulation of an incident action plan for resolution of the incident.

It was verified and validated by the peer assessment team that the Montgomery County Fire and Rescue Service did not have sufficient technical rescue or water and ice rescue incidents, which required an effective response force to be assembled for FY2010 through FY2013, Quarter 2, to provide reliable data. There are therefore no baseline service level performance statements provided for the effective response force for technical rescue or water and ice rescue incidents in this report.

It was verified and validated by the peer re-assessment team that the Montgomery County Fire and Rescue Service demonstrated a trend of improvement in its actual baseline performance for FY2010 through FY2013, Quarter 2.

Technical Rescue* - 90th Percentile Times - Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Alarm Handling	Pick-up to Dispatch	Metro	3:30	3:10	3:20	3:30	4:20
		Urban	3:10	2:00	3:10	3:10	3:10
		Suburban	5:40	7:00	3:00	3:30	7:00
		Rural	5:20	4:30	5:20	16:00	4:10
Turnout Time	Turnout Time 1st Unit	Metro	2:10	2:10	2:10	2:10	2:20
		Urban	4:20	2:00	4:00	2:10	2:00
		Suburban	4:00	4:20	3:40	4:20	4:00
		Rural	2:10	4:20	4:00	5:00	4:10
Travel Time	Travel Time 1st Unit **Distribution**	Metro	8:20	7:40	7:30	8:20	9:10
		Urban	8:30	7:20	8:40	7:30	7:00
		Suburban	10:30	10:30	10:50	11:50	6:20
		Rural	9:40	10:00	9:40	8:30	10:40
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	12:50	11:40	11:40	13:20	14:10
		Urban	12:50	11:20	13:30	12:30	12:50
		Suburban	14:30	12:50	14:30	15:10	12:10

Technical Rescue* - 90th Percentile Times - Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
		Rural	16:40	13:50	17:10	41:20	15:20

*The department based special operations ERF data on special and high risk Level events only. Incidents meeting the response plan criteria established for special and high risk call types are infrequent in occurrence producing minimal data from which to report.

Water/Ice Rescue - 90th Percentile Times - Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Alarm Handling	Pick-up to Dispatch	Metro	8:20	8:20	9:40	3:00	5:10
		Urban	3:00	3:00	N/A	N/A	N/A
		Suburban	5:30	2:00	5:30	N/A	N/A
		Rural	10:10	3:30	5:40	5:00	12:10
Turnout Time	Turnout Time 1st Unit	Metro	4:20	4:20	4:00	4:20	4:40
		Urban	3:30	3:30	N/A	N/A	N/A
		Suburban	5:50	3:50	6:40	4:20	5:10
		Rural	5:10	5:30	5:50	4:40	5:00
Travel Time	Travel Time 1st Unit **Distribution**	Metro	6:00	4:00	3:50	5:00	6:10
		Urban	3:40	9:00	N/A	N/A	N/A
		Suburban	9:40	3:40	2:50	00:10	9:40
		Rural	10:20	10:20	7:30	9:30	10:40
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	16:00	10:20	27:50	9:50	16:00
		Urban	10:20	10:20	N/A	N/A	N/A
		Suburban	13:00	13:00	8:20	N/A	N/A
		Rural	18:00	16:10	12:20	14:40	25:30

Criterion 5F – Hazardous Materials (Hazmat)

The Montgomery County Fire Rescue Service maintains a well-staffed and highly trained hazardous incident response team (HIRT) consisting of over 80 members assigned to 4 primary, or consolidated, response stations and non-consolidated stations throughout the county sharing multi-discipline response missions including fire, rescue, emergency medical services (EMS), weapons of mass destruction (WMD) and hazardous materials response. The amount of personnel and apparatus responding to a hazardous materials event is determined by a tiered response level plan throughout the county and to mutual-aid events in surrounding jurisdictions. The HIRT also offers assistance to other neighboring departments throughout the National Capital Region and is an active member of the Council of Governments mutual-aid response plan.

The department equips all front-line engines, trucks and rescues with a small equipment cache to handle minor gas and fuel leaks. Larger hazardous materials responses are handled by the two technician level crews. Each member of the hazardous materials team participates in verified hazardous materials training each year. The specially-designed hazardous materials response units at

these stations are crossed staffed by crews assigned to the engines in the stations, and on an as-needed basis.

During the first site visit it was identified that one criterion statement and two core competencies were not met: criterion statement 5F and core competencies 5F.1 and 5F.7. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department operates an adequate, effective, and efficient hazardous materials program directed toward protecting the community from the hazards associated with fires and uncontrolled releases of hazardous and toxic materials. The department has developed standard operating guidelines (SOG) to provide a central core of directives from which personnel can effectively, efficiently and safely meet the level of response for hazmat events. Department policy requires a complete review of SOGs as necessary; it was verified that the SOGs for the hazmat team were current and accessible to the members assigned to the hazmat team.

Core competency 5F.715 is now being met. The department uses its record management system (RMS) to capture data for analysis that collects information including apparatus event times, incident command benchmarks and sector accomplishments. Quarterly evaluations are provided and quarterly officer meetings occur to allow for new ideas and solutions to any issues that arise. While the appraisal process for the department's hazardous materials and emergency medical services programs are by far the most established and effective, it is recommended that the department further improve its current practices by conducting and documenting a formal appraisal process, at least annually, for its hazardous materials program. The department needs to use a consistent approach for all of its programs; one that will integrate into the agency goals and may return benefits such as training, funding or partnerships as applicable.

With a significant reduction in budget over the past several years, each program should try to recover as much money to the department as possible. Through legislation, the department can recover the cost of responding to hazardous materials incidents. Currently the department does not have an established process to allow it to recover the cost of equipment and supplies used on the scene of hazardous materials incidents. Establishment of such a process may aide in the replacement and recovery while reducing the allocation of staff time required. It is recommended that the department recover the cost of consumables used on the scenes of hazmat incidents.

The department has an excellent relationship with federal response assets located in the county. For example, the local National Institutes of Health and the National Institute of Standards and Technology (NIST) have hazmat units that supplement the department's resources. This should be commended as it provides the citizens and visitors with increased services. Staffing is ensured daily to provide adequate personnel for response in Montgomery County and to the capital beltway region.

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[15] 5F.7 An appraisal is conducted, at least annually, to determine the effectiveness of the hazardous materials program.

Core competency 5F.1[16] is now being met. The department's response and deployment standards are based upon the risks levels of moderate and high found in the standards of cover (SOC) document. The department's response and deployment standards are also based upon the metro, urban, suburban and rural population densities and the hazardous materials response demands of the community. Thirty-four fire stations and two rescue stations provide county-wide coverage; department staffing is based upon station location, incident type and frequency. The targeted service level objectives in the standards of cover benchmark statements are based on industry standards and best practices, as identified earlier in this report in Category II – Assessment and Planning. The objectives have been approved by the department and will be included in the next revision of the county's master plan. The department's benchmark service level objectives are as follows:

> For 90 percent of all hazardous materials incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, shall be: 10 minutes in metro and urban areas; 11 minutes and 30 seconds in suburban areas; and 15 minutes and 30 seconds in rural areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing the hot, warm and cold zones.

> For 90 percent of all hazardous materials incidents, the total response time for the arrival of the effective response force (ERF), staffed with 20 firefighters and officers including the technical response team, shall be 30 minutes in all areas. The ERF shall be capable of: analyzing a hazardous materials/weapons of mass destruction (WMD) incident to determine the complexity of the problem by estimating the potential outcomes within the endangered area; planning a response within the capabilities and competencies of available personnel, personal protective equipment and control equipment; implementing a response to favorably change the outcomes consistent with the emergency response plan and/or standard operating procedures; evaluating the progress of the planned response to ensure that the response objectives are effective; and adjusting the incident action plan accordingly

The department's baseline statements reflect actual performance from FY2010 to FY2013, Quarter 2. The department does rely on the use of mutual aid from neighboring fire departments to provide its effective response force complement of personnel. The department's actual baseline service level performance for hazmat incidents are as follows:

> For 90 percent of all hazardous materials incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, is: 11 minutes and 10 seconds in metro areas, 11 minutes and 40 seconds in urban areas; 12 minutes in suburban areas; and 13 minutes and 20 seconds in rural areas. The first-due unit is capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing the hot, warm and cold zones.

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[16] 5F.1   Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of hazardous materials emergency incidents.

It was verified and validated by the peer assessment team that the Montgomery County Fire and Rescue Service did not have sufficient hazardous materials incidents, which required an effective response force to be assembled for FY2010 through FY2013, Quarter 2, to provide reliable data. There are therefore no baseline service level performance statements provided for the effective response force for hazardous materials incidents in this report.

It was verified and validated by the peer re-assessment team that the Montgomery County Fire and Rescue Service demonstrated a trend of improvement in its actual baseline performance for FY2010 through FY2013, Quarter 2.

Hazardous Materials* - 90th Percentile Times - Baseline Performance			**2010-2013** 1st and 2nd quarters	**2013** 1st and 2nd quarters	**2012**	**2011**	**2010**
Alarm Handling	Pick-up to Dispatch	Metro	4:00	3:40	3:20	4:00	5:00
		Urban	4:20	4:00	3:20	5:20	5:40
		Suburban	4:30	2:50	4:30	5:10	4:50
		Rural	4:10	3:20	3:40	4:20	6:00
Turnout Time	Turnout Time 1st Unit	Metro	2:20	2:30	2:30	2:40	3:10
		Urban	2:20	2:00	2:40	3:10	2:50
		Suburban	2:20	2:10	2:40	3:10	3:30
		Rural	2:20	2:30	2:40	2:50	3:20
Travel Time	Travel Time 1st Unit **Distribution**	Metro	6:40	6:20	6:40	6:30	7:00
		Urban	6:00	5:10	7:00	9:50	5:30
		Suburban	7:10	7:10	5:50	6:50	9:00
		Rural	9:00	9:00	8:40	9:30	10:00
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	11:10	10:30	10:50	11:00	12:20
		Urban	11:40	10:00	10:20	14:40	11:30
		Suburban	12:00	10:40	11:30	12:10	19:30
		Rural	13:20	12:20	12:20	13:30	16:10

*The department based special operations ERF data on special and high risk level events only. Incidents meeting the response plan criteria established for special and high risk call types are infrequent in occurrence producing minimal data from which to report.

Criterion 5G – Emergency Medical Services

The Montgomery County Fire and Rescue Service responds to emergency medical services (EMS) situations to provide basic and advanced emergency medical responses. The department responds to approximately 80,000 EMS incidents per year. Approximately 45,000 of these incidents are classified as basic life support (BLS) responses with the remainder being advanced life support (ALS) responses. All personnel are trained to the emergency medical technician-basic (EMT-B) provider level as a minimum. All department apparatus are equipped to act as a BLS first responder and respond as such when BLS transport unit response times are extended. Additionally, 27 engines and 1 truck are staffed with at least one ALS provider and equipped with ALS equipment. These units, in combination with the ALS transport units, provide ALS delivery capability. The EMS

provider capability is distributed over 34 fire-rescue stations and two rescue stations with response units having adequate equipment to provide the stated level of service.

The EMS section is guided by the Maryland Institute for Emergency Medical Services System (MIEMSS), which oversees and coordinates all components of Maryland's EMS system, in accordance with Maryland statutes and regulations. The department is accredited under MIEMSS and therefore is required by the Code of Montgomery County Regulations to adhere to the standards and limitations set forth by this state agency. The Maryland Medical Protocols are guidelines for treatment of all pre-hospital patients; they are updated every year.

During the first site visit it was identified that one criterion statement and two core competencies were not met: criterion statement 5G and core competencies 5G.1 and 5G.10. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department operates an EMS program that provides the community with a designated level of out-of-hospital emergency medical care. There are standard operating guidelines (SOGs) in place that effectively guide the department and its personnel. The department's EMS response activities are guided by Maryland Medical Protocols (MMP). These protocols consist of standards of care and standing orders for treatment of all pre-hospital patients. All levels of EMS providers are required to follow the MMP. The protocols are available on line and updated each year.

The department maintains patient care records for all patients who are treated, regardless of whether they were transported. The department utilizes the Electronic Patient Care Reporting (ePCR) system to document patient encounters and to store patient records in a central secure data repository. The department is working toward a solution that will allow it to interface the ePCR system with MIEMSS. The department's medical review committee (MRC) is the basis of its quality assurance-quality improvement program, which provides the department with both a mechanism for continuous quality improvement and a means to review events. The MRC is a peer review process with the active participation of all the EMS operational program components, including the MRC chairperson, active and current EMS providers, administrators and the department's medical director.

The department has a Health Insurance Portability and Accountability Act (HIPAA) compliance program in place. All personnel received training to this act. Members are responsible for maintaining privacy and confidentiality of an individual's personal information in accordance to local, state and federal protocols. Every employee of the department who is directly or indirectly involved in patient care, or who has access to patient medical information, is required to complete mandatory HIPAA training.

Core competency 5G.10[17] is now being met. The department conducts a formal annual appraisal to determine the effectiveness of the EMS program and holds weekly and monthly meetings in addition to the yearly staff strategic planning meeting to discuss goals, objectives and operational issues. Also, a customer satisfaction survey is sent out annually to approximately 200 recipients of EMS services of which approximately 25 percent are returned.

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[17] 5G.10 An appraisal is conducted, at least annually, to determine the effectiveness of the EMS program.

In November, 2005, the department attempted recording patient outcome data to analyze the effectiveness of its EMS program. The inception of this program was linked to the initiation of a new EMS pilot program for the delivery of ALS. Establishing this data collection requirement meant that the department needed to develop a process to retrieve patient outcome data from the receiving hospitals. If an electronic data system were created, its widespread implementation and documentation, both at the pre-hospital level and in acute care settings, could provide an invaluable opportunity that would enable the department to comprehensively evaluate the entire path of a patient's course of treatment to its final outcome. It is recommended that the department develop a process to retrieve patient outcome data from the area receiving hospitals in an effort to facilitate the retrieval of data that helps to track the effectiveness of provider interventions.

In 2010, two EMS duty officer positions were eliminated due to lack of funding. Since then, the EMS call volume continues to increase and places additional work load on personnel who fill dual roles to accommodate the workload of the two eliminated positions. As a result of this increase in workload, the department was able to secure funding within the FY14 budget to reinstitute one EMS duty officer position, which was implemented July 14, 2013. The area of quality assurance has been affected as well as field access to supervisory positions for guidance and direction. The first site-visit team recommended that the department examine a staffing model for the EMS Section to enhance supervisory and managerial functions of field personnel. The department was able to secure funding within the FY14 budget to reinstitute one EMS duty officer position, which was implemented July 14, 2013. This recommendation has been met.

Core competency 5G.1[18] is now being met. The department's response and deployment standards are based upon the risks levels of low, moderate and high found in the standards of cover (SOC) document. The department's response and deployment standards are also based upon the metro, urban, suburban and rural population densities and the EMS response demands of the community. Thirty-four fire-rescue stations and two rescue stations provide county-wide coverage; department staffing is based upon station location, incident type and frequency. The targeted service level objectives in the standards of cover benchmark statements are based on industry standards and best practices, as identified earlier in this report in Category II – Assessment and Planning. The objectives have been approved by the department and will be included in the next revision of the county's master plan.

EMS) incidents consist of ALS and BLS incidents. ALS incidents consist of ALS1 (requiring 1 ALS provider) or ALS2 (requiring 2 ALS providers) depending upon the severity of the incident as defined in the department's emergency medical dispatch protocols. ALS patients are considered moderate to high risk, while BLS patients are considered low risk.

The department's benchmark service level objectives are as follows:

> For 90 percent of all <u>ALS1 and ALS2</u> <u>incidents</u>, the total response time for the arrival of the first-due unit, staffed by at least 1 EMT-P and 1 EMT-B, shall be: 11 minutes in metro and urban areas; 12 minutes and 30 seconds in suburban areas; and 14 minutes and 30 seconds in rural areas. The first-due ALS unit shall be capable of: assessing scene safety and

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[18] 5G.1 Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of emergency medical incidents.

establishing command; sizing-up the situation; conducting initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first-responder medical aid including automatic external defibrillation (AED); initiating cardio-pulmonary resuscitation (CPR); and providing intravenous (IV) access-medication administration if required and assisting transport personnel with packaging the patient.

For 90 percent of all <u>BLS incidents</u>, the total response time for the arrival of the first-due EMS unit, an ambulance staffed by 2 EMT-Bs or a medic unit staffed by 1 EMT-P and 1 EMT-B, shall be: 14 minutes in metro and urban areas; 16 minutes in suburban areas; and 20 minutes in rural areas. The first-due EMS unit shall be capable of: assessing scene safety and establishing command; sizing-up the situation; conducting initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first-responder medical aid including AED; initiating CPR; providing IV access-medication administration, if required; and assisting transport personnel with packaging the patient.

For 90 percent of all <u>ALS1 incidents</u>, the total response time for the arrival of the effective response force (ERF), staffed by at least 1 EMT-P and at least 4 EMT-Bs responding in two units, shall be: 12 minutes in metro and urban areas; 13 minutes in suburban areas; and 16 minutes in rural areas. The ERF shall be capable of: providing incident command and producing related documentation; completing patient assessment; providing appropriate treatment; performing AED; initiating CPR; providing IV access-medication administration; and providing transportation.

For 90 percent of all <u>ALS2 incidents</u>, the total response time for the arrival of the ERF, staffed by at least 2 EMT-Ps and at least 3 EMT-Bs responding in two or three units, shall be: 10 minutes and 50 seconds in metro, and 11 minutes and 50 seconds in urban areas; 11 minutes and 40 seconds in suburban areas; and 12 minutes and 50 seconds in rural areas[19]. The ERF shall be capable of: providing incident command and producing related documentation; completing patient assessment; providing appropriate treatment; performing AED; initiating CPR; providing IV access-medication administration; and providing transportation.

Note: ERF benchmarks have not been established for BLS incidents because a single two-person unit i.e., first arriving EMS unit, is sufficient to handle the patient except in rare cases when a staffing unit is also dispatched, usually at the request of the on-scene EMS unit to assist with a heavy patient.

The department's baseline statements reflect actual performance from FY2010 to FY2013, Quarter 2. The department does rely on the use of mutual aid from neighboring fire departments to provide its effective response force complement of personnel. The department's actual baseline service level performance for EMS incidents is as follows:

For 90 percent of all <u>ALS1 incidents</u>, the total response time for the arrival of the first-due unit, staffed by at least 1 EMT-P and 1 EMT-B, is: 11 minutes and 30 seconds in metro areas;

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[19] ALS 1 and ALS 2 call types are of higher risk categories; ALS 2 incident types which are considered life threatening, require the assembly of two paramedics on the scene to begin ALS interventions. To that end, a more rigorous response time goal was established for these call types.

12 minutes and 50 seconds in urban areas; 13 minutes in suburban areas; and 13 minutes and 10 seconds in rural areas. For 90 percent of all ALS2 incidents, the total response time for the arrival of the first-due unit, staffed by at least 1 EMT-P and 1 EMT-B, is: 9 minutes and 40 seconds in metro and urban areas; 10 minutes and 30 seconds in suburban areas; and 12 minutes and 50 seconds in rural areas. The first-due ALS unit is capable of: assessing scene safety and establishing command; sizing-up the situation; conducting initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first-responder medical aid including AED; initiating cardio-pulmonary resuscitation CPR; and providing IV access-medication administration if required and assisting transport personnel with packaging the patient.

For 90 percent of all BLS incidents, the total response time for the arrival of the first-due EMS unit, an ambulance staffed by 2 EMT-Bs or a medic unit staffed by 1 EMT-P and 1 EMT-B, is: 13 minutes and 20 seconds in metro areas; 13 minutes and 40 seconds in urban areas; 14 minutes and 50 seconds in suburban areas; and 15 minutes and 20 seconds in rural areas. The first-due EMS unit is capable of: assessing scene safety and establishing command; sizing-up the situation; conducting initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first-responder medical aid including AED; initiating CPR; providing IV access-medication administration, if required; and assisting transport personnel with packaging the patient.

For 90 percent of all ALS1 incidents, the total response time for the arrival of the ERF, staffed by at least 1 EMT-P and at least 4 EMT-Bs responding in two units, is: 13 minutes and 30 seconds in metro areas, 14 minutes in urban areas; 15 minutes and 10 seconds in suburban areas; and 15 minutes and 40 seconds in rural areas. The ERF is capable of: providing incident command and producing related documentation; completing patient assessment; providing appropriate treatment; performing AED; initiating CPR; providing IV access-medication administration; and providing transportation.

For 90 percent of all ALS2 incidents, the total response time for the arrival of the ERF, staffed by at least 2 EMT-Ps and at least 3 EMT-Bs responding in two or three units, is: 13 minutes and 40 seconds in metro areas; 13 minutes and 50 seconds in urban areas; 14 minutes and 50 seconds in suburban areas; and 16 minutes and 20 seconds in rural areas. The ERF is capable of: providing incident command and producing related documentation; completing patient assessment; providing appropriate treatment; performing AED; initiating CPR; providing IV access-medication administration; and providing transportation.

It was verified and validated by the peer re-assessment team that the Montgomery County Fire and Rescue Service demonstrated a trend of improvement in its actual baseline performance for FY2010 through FY2013, Quarter 2.

ALS 1 – 90th Percentile Times – Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Alarm Handling	Pick-up to Dispatch	Metro	3:40	3:10	3:20	3:30	4:00
		Urban	3:40	3:20	3:20	3:50	4:10

ALS 1 – 90th Percentile Times – Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
		Suburban	3:40	3:10	3:20	3:40	4:40
		Rural	3:30	3:00	3:10	3:30	4:00
Turnout Time	Turnout Time 1st Unit	Metro	2:10	2:10	2:10	2:10	2:10
		Urban	2:10	2:10	2:10	2:10	2:10
		Suburban	2:20	2:10	2:10	2:20	2:20
		Rural	2:20	2:10	2:10	2:10	2:20
Travel Time	Travel Time 1st Unit **Distribution**	Metro	7:20	7:00	6:50	7:20	7:50
		Urban	8:20	7:50	8:00	8:30	8:40
		Suburban	8:40	8:30	8:10	8:40	9:30
		Rural	9:10	8:50	8"30	9:30	10:10
	Travel Time ERF **Concentration**	Metro	8:50	8:30	8:40	8:50	9:20
		Urban	9:10	8:40	9:00	9:10	9:40
		Suburban	10:10	9:50	9:30	10:00	11:00
		Rural	11:20	11:10	11:00	11:20	11:30
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	11:30	6:60	11:00	11:30	12:40
		Urban	12:50	7:10	12:10	12:50	13:30
		Suburban	13:00	7:30	12:00	12:50	14:20
		Rural	13:10	7:40	12:20	13:20	14:40
	Total Response Time ERF **Concentration**	Metro	13:30	13:00	12:50	13:30	14:30
		Urban	14:00	13:20	13:20	14:20	14:50
		Suburban	15:10	14:20	13:50	15:10	17:10
		Rural	15:40	15:10	15:00	15:40	16:30

ALS 2 – 90th Percentile Times – Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Alarm Handling	Pick-up to Dispatch	Metro	3:10	2:50	2:50	3:00	3:40
		Urban	3:10	2:50	2:50	3:00	3:50
		Suburban	3:00	2:40	2:40	2:50	3:30
		Rural	3:00	2:30	2:50	3:10	3:30
Turnout Time	Turnout Time 1st Unit	Metro	2:10	2:10	2:10	2:10	2:10
		Urban	2:10	2:10	2:00	2:20	2:20
		Suburban	2:20	2:10	2:10	2:20	2:20
		Rural	2:20	2:20	2:20	2:20	2:20
Travel Time	Travel Time 1st Unit **Distribution**	Metro	7:00	6:30	6:30	7:10	7:30
		Urban	7:50	8:40	7:10	8:20	9:30
		Suburban	8:00	8:10	7:20	7:40	8:50
		Rural	8:40	8:30	8:30	8:40	9:30
	Travel Time ERF **Concentration**	Metro	9:40	9:30	9:30	9:20	10:10
		Urban	9:40	8:20	9:00	10:10	11:20
		Suburban	10:30	10:40	10:30	9:20	11:40

ALS 2 – 90th Percentile Times – Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
		Rural	12:50	12:20	12:40	13:30	12:30
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	10:50	10:00	10:10	11:10	11:50
		Urban	11:50	9:50	11:00	11:30	13:40
		Suburban	11:40	11:10	11:30	10:50	13:10
		Rural	12:50	12:00	12:10	12:30	14:00
	Total Response Time ERF **Concentration**	Metro	13:40	13:00	13:30	13:10	14:40
		Urban	13:50	13:20	12:20	14:00	16:10
		Suburban	14:50	14:40	14:40	13:30	16:30
		Rural	16:20	16:00	16:00	17:00	16:20

BLS – 90th Percentile Times – Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Alarm Handling	Pick-up to Dispatch	Metro	4:00	3:30	3:40	4:00	4:30
		Urban	4:20	3:40	3:50	4:20	5:00
		Suburban	4:10	3:40	3:40	4:10	4:30
		Rural	4:00	3:40	3:40	4:00	4:30
Turnout Time	Turnout Time 1st Unit	Metro	2:10	2:00	2:10	2:10	2:20
		Urban	2:10	2:10	2:10	2;10	2:20
		Suburban	2:20	2:10	2:10	2:20	2:30
		Rural	2:10	2:10	2:10	2:10	2:20
Travel Time	Travel Time 1st Unit **Distribution**	Metro	8:40	8:20	8:20	8:40	9:00
		Urban	8:40	8:00	8:10	8:10	N/A
		Suburban	10:00	9:20	9:20	10:10	N/A
		Rural	10:50	10:20	10:30	10:50	11:00
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	13:20	12:40	12:40	13:20	14:20
		Urban	13:40	12:40	12:50	15:30	15:30
		Suburban	14:50	13:20	13:50	15:10	15:50
		Rural	15:20	14:40	14:40	15:20	16:30

Criterion 5H – Domestic Preparedness Planning and Response

The Montgomery County Fire and Rescue Service participate with other county agencies to ensure a coordinated effort is in place for disaster planning, mitigation, response and recovery. These efforts are conducted through the Montgomery County Office of Emergency Management and Homeland Security (MCOEMHS) and are overseen by a director who is supported by an operations chief, planning chief, finance and administration officer, and program and regional managers. Disaster preparedness information is disseminated via electronic and printed formats to the public.

The department operates an all-hazards preparedness program that defines roles and responsibilities of all participating departments and/or external agencies. An appropriate multi-agency

organizational structure is identified and authorized to carry out the all-hazards plan predetermined functions and duties.

Montgomery County has developed an emergency operations plan (EOP) to document the county's preparedness and response to natural and human-caused disasters. The EOP involved input from different county agencies; it is shared with those agencies to communicate their roles and responsibilities.

The EOP provides a comprehensive means to ensure preparedness for, mitigation of, response to, and recovery from disasters occurring within the county; it provides a mechanism that directs county and volunteer agencies in their planning, response and recovery activities. The plan includes functional annexes that address specific types of hazards or emergencies. Annual exercise are conducted to ensure those participating understand and follow the established plan.

The Montgomery County Emergency Management Group provides organizational structure and authority to carry out the plans pre-arranged functions and duties. This group has processes in place to activate and deploy local resources that are supported by communications systems, equipment caches and other support equipment and apparatus. MCOEMHS operates the county emergency operating center (EOC), which provides interagency coordination and information sharing that supports situational awareness and facilitate requests for equipment and supplies.

Criterion 5I – Aviation Rescue and Fire Fighting Services

The Montgomery County Fire and Rescue Service has responsibility for providing fire protection to the Montgomery County Airport. This is an unrated airport. Dispatch procedures include assignments for a single unit response for small planes and multiple unit response for large planes. Equipment and stations are located within two miles of the airpark facility. The department's apparatus are equipped to meet and exceed the tool compliment for aviation rescue and fire fighting (ARFF) vehicles outlined in the *National Fire Protection Association (NFPA) 403: Standard for Aircraft Rescue and Fire-Fighting Services at Airports*; all department apparatus are equipped the same. Response personnel are trained to hazardous materials technician level.

During the first site visit it was identified that one criterion statement and two core competencies were not met: criterion statement 5I and core competencies 5I.4 and 5F.7. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department operates an adequate, effective and efficient program directed toward an aviation accident or incident occurring at, or in the immediate area.

Core competency 5I.4[20] is now being met. ARFF specific standard operating guidelines (SOGs) have been drafted, but not accepted due to management and labor issues concerning compensation. When the draft SOGs were written the agency was able to place additional responsibilities on the companies responsible to provide ARFF services without added compensation. Currently, however, those SOGs will be very hard to formalize; with such understanding the agency is utilizing

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[20] 5I.4   Current standard operating procedures or general guidelines are in place to direct aviation rescue and firefighting activities.

documents that includes an air park emergency plan drafted in 2002, which is still communicated to the personnel for air park responses and notifications. Other than the date of this plan, the personnel can benefit from and be informed of the different agency responsibilities, notifications and protocols of an emergency at the air park or one off site without issues of compensation. The department is encouraged to continue the process of formally implementing the draft guidelines.

Core competency 5I.621 is now being met. The current appraisal process for the ARFF program has substantial room where improvements can be gained; however, the second site visit verified a minimal appraisal process is in place that utilizes after action reports and post incident analysis to measure the program effectiveness. The second site visit also verified that aviation emergencies are very infrequent and that the two recent incidents occurred in communities away from the air park that were mitigated by the agency's structural firefighting personnel. It is recommended that the department further improve its current practices by conducting and documenting a formal appraisal process, at least annually, for its aviation rescue and fire fighting program.

Core competency 5I.1[22] is now being met. The department's response and deployment standards are based upon the metro, urban, suburban and rural population densities and the aviation rescue and fire fighting demands of the community. Thirty-four fire stations and two rescue stations provide county-wide coverage; department staffing is based upon station location, incident type and frequency. The targeted service level objectives in the standards of cover benchmark statements are based on industry standards and best practices, as identified earlier in this report in Category II – Assessment and Planning. The objectives have been approved by the department and will be included in the next revision of the county's master plan. The department's benchmark service level objectives are as follows:

> For 90 percent of all ARFF incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 3 firefighters, shall be: 10 minutes in metro and urban areas; 11 minutes and 30 seconds in suburban areas; and 15 minutes and 30 seconds in rural areas. The first-due unit shall be capable of: establishing command; sizing-up the situation; placing one line in service at either 150 gallons per minute or 250 gallons per minute; complying with the requirements of two-in and two-out; initiating mitigation efforts within one minute of arrival; and providing first-responder medical aid including cardiac defibrillation.

> For 90 percent of all ARFF incidents, the total response time for the arrival of the effective response force (ERF), staffed with 33 firefighters and officers, shall be 30 minutes in all areas. The ERF shall be capable of: establishing command; sizing-up the situation; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the requirements of two-in and two-out; rescuing at-risk victims; and providing first-responder medical aid including cardiac defibrillation.

It was verified and validated by the peer assessment team that the Montgomery County Fire and Rescue Service did not have sufficient aviation rescue and fire fighting incidents, which required an effective response force to be assembled for FY2010 through FY2013, Quarter 2, to provide reliable

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[21] 5I.6   An appraisal is conducted, at least annually, to determine the effectiveness of the aviation rescue and fire fighting program.
[22] 5I.1   Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of aviation rescue and fire fighting incidents.

data. There are therefore no baseline service level performance statements provided for the effective response force for aviation rescue and fire fighting incidents in this report.

Criterion 5K – Bomb Squad

The Montgomery County Fire and Rescue Service maintains an explosive device (bomb squad) response capability. The Fire Explosives Investigation (FEI) Section personnel also serve as members of the Montgomery County Fire Rescue Service Bomb Squad, which is certified as a bomb squad by the Federal Bureau of Investigation (FBI). The FEI section currently is comprised of 13 investigators including 1 battalion chief, 2 captains, 9 lieutenants, and 1master fire fighter.

The 9 lieutenants work 4 shifts comprising 2 lieutenants partnered together, providing 24-hour coverage, 7 days a week. Each captain is the direct supervisor for personnel from two shifts, respectively.

All the shifts have a primary responsibility for origin and cause investigations and bomb squad operations. Their duties include responding to requests for assistance from fire suppression personnel and police officers, conducting on-scene investigations, determining the origin and cause of fires, beginning preliminary follow-up investigations, conducting surveillances, serving arrest warrants, arrest suspected individuals and rendering safe activities.

During the first site visit it was identified that one criterion statement and two core competencies were not met: criterion statement 5K and core competencies 5K.1 and 5K.6. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

The department operates an adequate, effective and efficient program directed toward bomb squad incidents occurring at or in the immediate area. The department standard operating guidelines define operations of the team. Team members are involved with a wide variety of programs that provide positive impact on the program. Investigators work regularly with agencies including the Bureau of Alcohol, Tobacco, Firearms and Explosives, FBI, and the Montgomery County state attorney's office. Investigators also have been assigned as members of federal, state and local arson task forces.

Core competency 5K.6[23] is now being met. The department annually appraises the effectiveness of its bomb squad program through team training, multi-agency exercises, and by the fire investigation staff's continuous evaluation of the various disciplines. The effectiveness of the bomb squad is also reviewed through after-action reviews after significant events to improve departmental and inter-agency operability. While the current process for the bomb squad program is more effective than what is in place for several other programs, there remains room across the board where improvements may be gained. A department wide appraisal process conducted annually may benefit by integrating those identified gaps into department goals and addressing such through training, funding or other appropriate means. It is recommended that the department further improve its current practices by conducting and documenting a formal appraisal process, at least annually, for bomb squad program.

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[23] 5K.6 An appraisal is conducted, at least annually, to determine the effectiveness of the bomb squad program.

Core competency 5K.1[24] is now being met. The department's response and deployment standards are based upon the risks levels of low, medium and high found in the standards of cover (SOC) document. The department's response and deployment standards are also based upon the metro, urban, suburban and rural population densities and the aviation rescue and fire fighting demands of the community. Thirty-four fire stations and two rescue stations provide county-wide coverage; department staffing is based upon station location, incident type and frequency. The targeted service level objectives in the standards of cover benchmark statements are based on industry standards and best practices, as identified earlier in this report in Category II – Assessment and Planning. The objectives have been approved by the department and will be included in the next revision of the county's master plan. The department's benchmark service level objectives are as follows:

> For 90 percent of all bomb squad incidents, the total response time for the arrival of the first-due bomb squad unit, i.e., a bomb squad vehicle itself or a bomb technician responding in a department vehicle, shall be: 30 minutes in metro and urban areas; 35 minutes in suburban areas; and 40 minutes in rural areas. The first-due unit shall be capable of: assessing the scene; determining the presence of an explosive device; determining the need for additional resources; estimating potential harm without intervention; and establishing hot, warm, and cold zones.

> For 90 percent of all bomb squad incidents, the total response time for the arrival of the effective response force (ERF), staffed with personnel including the bomb squad, shall be: 40 minutes in metro and urban areas; 45 minutes in suburban areas; and 50 minutes in rural areas. The ERF shall be capable of: obtaining a detailed description of the suspected package and its location; gathering intelligence and background information from the on-scene witnesses, performing a review of department documentation defining life-threatening and non-life threatening situations; performing a medical assessment of technicians prior to donning

The department's baseline statements reflect actual performance from FY2010 to FY2013, Quarter 2. The department does rely on the use of mutual aid from neighboring fire departments to provide its effective response force complement of personnel. The department's actual baseline service level performance for explosive device is as follows:

> For 90 percent of all bomb squad incidents, the total response time for the arrival of the first-due bomb squad unit, i.e., a bomb squad vehicle itself or a bomb technician responding in a department vehicle, is: 1 hour, 6 minutes and 20 seconds in metro areas; 32 minutes and 40 seconds in urban areas; 1 hour, 23 minutes and 30 seconds in suburban areas; and 37 minutes and 30 seconds in rural areas. The first-due unit is capable of: assessing the scene; determining the presence of an explosive device; determining the need for additional resources; estimating potential harm without intervention; and establishing hot, warm, and cold zones.

> It was verified and validated by the peer assessment team that the Montgomery County Fire and Rescue Service did not have sufficient bomb squad incidents, which required an effective

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[24] 5K.1   Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of bomb squad incident.

response force to be assembled for FY2010 through FY2013, Quarter 2, to provide reliable data. There are therefore no baseline service level performance statements provided for the effective response force for bomb squad incidents in this report.

It was verified and validated by the peer re-assessment team that the Montgomery County Fire and Rescue Service demonstrated a trend of improvement in its actual baseline performance for FY2010 through FY2013, Quarter 2.

Bomb Squad – 90th Percentile Times – Baseline Performance			2010-2013 1st and 2nd quarters	2013 1st and 2nd quarters	2012	2011	2010
Alarm Handling	Pick-up to Dispatch	Metro	5:50	7:10	6:40	6:10	6:40
		Urban	7:10	6:00	8:20	5:10	7:10
		Suburban	7:40	5:50	6:10	3:00	6:10
		Rural	3:40	6:10	5:30	3:40	5:30
Turnout Time	Turnout Time 1st Unit	Metro	4:10	1:50	16:50	00:40	16:00
		Urban	N/A	N/A	N/A	N/A	N/A
		Suburban	N/A	1:20	3:20	N/A	2:20
		Rural	N/A	4:30	N/A	N/A	4:30
Travel Time	Travel Time 1st Unit **Distribution**	Metro	19:00	21:40	24:00	28:40	24:50
		Urban	N/A	12:50	8:10	N/A	12:50
		Suburban	N/A	11:40	15:50	11:50	11:50
		Rural	11:50	31:10	17:30	26:00	26:00
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Metro	1:06:20	50:40	2:13:30	1:21:50	40:10
		Urban	32:40	N/A	N/A	32:40	N/A
		Suburban	1:23:30	N/A	1:23:30	1:18:40	19:40
		Rural	37:30	13:20	27:00	N/A	37:30

*The department based special operations ERF data on high risk level events only. Incidents meeting the response plan criteria established for high risk call types are infrequent in occurrence producing minimal data from which to report.

*Criterion 5L –*FEMA USAR

The Montgomery County Collapse Rescue Team was established in 1985 as a work group to study the collapse rescue problem in Montgomery County. The work group looked at the potential for different types of collapse to occur in Montgomery County and surrounding areas. The work group determined that as a result of the explosive growth, an aging infrastructure, and more complex underground engineering procedures, an organized effort was warranted to deal with the collapse potential. Other areas of concern included the terrorist potential (due to the proximity to Washington, D.C.), weather related concerns such as hurricane, flood or tornado and the potential for other natural disasters such as an earthquake.

The Urban Search and Rescue (USAR) team is a highly trained, specialized group of firefighters, paramedics, and civilian specialists organized to handle unique and challenging rescue situations. As

a result of grant funding, the team has purchased a unique compliment of rescue, medical, search, communication, and logistical support equipment to compliment the specialized training.

Locally, the USAR team responds to trench accidents, building collapses, confined space incidents, mass casualty incidents, urban victim search, long duration incidents and any other incident in which its specialized equipment or expertise may be needed. The team is prepared for local disaster response resulting from earthquakes, tornadoes, hurricanes, terrorist acts or other catastrophic events. On a national basis, the team responds as a Federal Emergency Management Agency (FEMA) USAR Maryland Task Force 1 (MD –TF1).

The department operates an adequate, effective and efficient program directed toward FEMA USAR incidents occurring at or in the immediate area. Current standard operating guidelines are in place to define operations of MD-TF1. Team members are involved with a wide variety of programs, work groups and incident support teams that provide positive impact on MD-TF1's program. It is evident that MD-TF1 has deployed many times and is one of the finest teams in the federal system and is prepared for a no-notice event.

MD-TF1 went through a program appraisal referred in 2010 and scored very high. The program office has already released the appraisals for the next three years. MD-TF1 should remain prepared for the next evaluation.

The department's response and deployment standards are based upon externally generated USAR program objectives. The objectives are met by MD-TF1.

Category VI — Physical Resources

The Montgomery County Fire and Rescue Service maintains 34 fire stations and 2 rescue stations and 1 maintenance support facility. In the past three years, the county has added two new stations and completed the construction of a replacement station for one of its oldest and smallest existing stations. Plans are in the works to add an additional two new stations and replace another four existing stations. Montgomery County has established a centralized, county-wide maintenance program in a large, leased site. Future plans include the addition of two additional satellite maintenance facilities.

The department ensures the development and use of physical resources is consistent with its established plans. A systematic and planned approach to the future development of facilities is in place. All appropriate parties, including the governing body, administration and staff are involved in the development of the major plans and proposals to ensure its use of physical resources is consistent with its master plan. The Department of General Services oversees the facility planning phase of a project. The Office of Management and Budget evaluates requests for new projects and makes recommendations to the county executive. The department works closely with the Maryland-National Capital Park and Planning Commission, which has jurisdiction over land use issues and where to site facilities.

The department's fixed facility resources are designed, maintained, managed and adequate to meet its goals and objectives. The construction of two additional stations and replacement of four more

stations, as identified in the master plan, will allow the department to continue to improve its standards of cover objectives and its ability to accommodate historical growth in the county.

The department has a position designated to focus on facility issues including compliance with all local, state, and federal codes and regulations. The position works with representatives from the safety, code enforcement, apparatus and capital projects and facilities sections to identify and mitigate regulation issues. The department works with the Department of Environmental Protection and the Department of Permitting Services to ensure that its facilities comply with applicable building and environmental codes and regulations. The department's apparatus resources are designed and purchased to be adequate to meet its goals and objectives. The department plans for the appropriate distribution and concentration of the apparatus in an attempt to ensure a capability to meet its standards of cover objectives.

The inspection, testing, preventive maintenance, replacement schedule and emergency repairs of all apparatus are well established and meet the emergency apparatus service and reliability needs. The vehicle maintenance division is modern and well managed with clean work areas and a functional records management system capable of tracking every vehicle in the fleet. There is direct communication to and from the maintenance division to the operations division to schedule service work based upon preventive maintenance schedules and unforeseen incidents of emergency maintenance needs. The maintenance division personnel perform routine maintenance and most other repairs. Additional support is available from local factory service centers. Mechanics have Automotive Service Excellence (ASE) and emergency vehicle technician (EVT) certification. There is a well-stocked parts supply area that ensures minimum down-time due to delays in obtaining the necessary parts. All manufacturers' recommendations are being followed and all legislation requirements are being met.

The shared expectations of both the operations and maintenance division are well established in general operating guidelines. They are reviewed on an annual basis to ensure continuity of operations and a consistent approach to keeping the fleet well maintained.

Currently, the department's fleet maintenance section is unable to provide accurate fuel utilization records on fire department vehicles. An electronic system is not in use for capturing this data at all of the fuel dispensing sites. At most of the fuel sites paper records are being utilized; this results in the lack of capability to adequately and accurately perform analysis and prepare reports. It is recommended that the department continue to seek and implement technology to provide a department- wide records management system for collecting and analyzing apparatus and equipment maintenance.

The department's fleet section has had to expand working hours to accommodate apparatus maintenance needs. Additionally, the department outsources some of the maintenance workload resulting in increased costs and extended out-of-service time. It is recommended that the department move forward with a staffing model for the fleet section and plan for budgetary allocations to allow the department to have adequate trained and certified personnel to meet its maintenance needs.

The tools and small equipment resources are adequate and designed and maintained to meet the agency's goals and objectives. The fleet section order, stocks, maintains and distributes the tools and small equipment for all stations and divisions in the department. The facility is well managed and stocked to assure that all items required by the department are readily available.

The department currently utilizes a combination of paper records and standalone databases to track parts inventories for the fleet section. This mix of methods is not conducive to allowing accurate and timely inventory management or for providing a mechanism for analysis and reporting. It is recommended that the department implement an electronic inventory control system that will allow the analysis of data input and reduce or eliminate dependency on the current mix of differing databases, paper records and other reporting methods.

Safety equipment is adequate and designed to meet the agency's goals and objectives. The department has a comprehensive safety program and takes an aggressive approach to improving the safety and efficiency or the work environment by researching and testing new safety equipment prior to distribution. This section also has staff certified to maintain self-contained breathing apparatus (SCBA) and complete annual fit testing. Certain equipment such as SCBA face pieces, structural firefighting personal protective equipment (PPE), eye and hearing protection, uniforms and N95 masks are issued. Other safety equipment is provided for particular tasks on an as needed basis.

A safety equipment inventory control and maintenance system is in place and current for department career and non-career personnel. The department has quality assurance measures in place to ensure PPE is inspected and tested at least annually, inspected and tested after a significant event and maintained in accordance to the NFPA 1851: *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*. In addition, the department conducts regular station safety inspections that address the proper care, maintenance and usage of safety equipment.

Category VII — Human Resources

The human resources functions for the Montgomery County Fire and Rescue Service are provided through the department's human resource section that is part of the administrative services division; the HR section works in conjunction with the county's office of human resources.

During the first site visit it was identified that one criterion statement and one core competency were not met: criterion statement 7C and core competency 7C.1. The second site visit confirmed these items have been satisfactorily addressed. Additional detail related to the team's findings is located below in its observations about the ability of the department to meet the criterion statement and core competency expectations.

General human resources administration practices are in place and are consistent with county, state and federal statutory and regulatory requirements. Human resources staff administers the necessary county policies, procedures and directives to ensure compliance with all of the related demands. The county's human resources manager is designated as the one person responsible for all human resources activities in the various county departments.

The department lacks sufficient personnel to perform all assignments and tasks associated with human resources administrative functions. It is recommended that the department analyze staffing needs and workloads to provide for increased efficiencies whether through staffing or work processes.

The county and the department manage the hiring process jointly. The department has engaged an outside contractor for entry level testing examinations and has validated the entry level examination. The department utilizes the Candidate Physical Ability Test (CPAT), which has been endorsed by the

International Association of Fire Fighters (IAFF), the International Association of Fire Chiefs (IAFC) and has been reviewed by the U.S. Department of Justice. Background investigations are managed in conjunction with the Montgomery County Department of Police.

The department has a defined, supervised probationary process to evaluate new members. Recruit firefighters are considered probationary and are evaluated by the training staff regularly through the use of performance-based evaluations. The collective agreement does not provide for probationary periods for promoted members; however, the department does address job performance for newly promoted members through its annual employee appraisal program.

The department should evaluate the benefits of a dedicated uniform recruiter to ensure the department attracts qualified minority candidates into the fire rescue service. This uniform recruiter may be able to relate with the citizens in the capital region and market the department to those who live in the region. It is recommended that the department assess the human resources assigned to manage, market and recruit diverse citizens of Montgomery County and surrounding areas.

Personnel policies and procedures are in place, documented and used to guide both administrative and personnel behavior.

Core competency 7C.1[25] is now being met. The department has an abundance of documentation to regulate and guide administrative and personnel activities. These include: department policies and procedures, including Fire and Rescue Commission Policies and Regulations; Montgomery County Personnel Regulations; Maryland Emergency Medical Protocols; department directives; and fire chief's general orders. All personnel have access at the station level to applicable guidelines in the station library and through the department website. At the time of the first site visit many of the policy and guidelines were old by date and needed to be reviewed to show currency. Appropriate steps were taken in the last year to address this concern. It is recommended that the department work with HR to develop a process by which standard operating guidelines are kept current.

Policies defining and prohibiting discrimination, or related harassment, are outlined in department policies and procedures. Department and county policies exceed state and federal requirements. The related information is provided to new employees at the time of hiring and any significant updates are regularly communicated to staff as they occur.

Human resources development and utilization is consistent with the department's established mission, goals and objectives. The department has a process whereby, on an on-going basis, assessments of job functions and job descriptions are accomplished. Members of the department's human resource section make sure existing practices meet the needs of the department.

A system and practices for providing employee-member compensation is in place. All unionized staff wages are as a result of collective bargaining. All members are provided with documentation of the salaries and benefits derived from that process. The compensation for department staff outside of the collective bargaining agreement is aligned with comparable employees in other city and county departments.

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[25] 7C.1 Personnel policies, procedures and rules are current, written, and communicated to all personnel.

Occupational health and safety and risk management programs are established and designed to protect the organization and personnel from unnecessary injuries or losses from accidents or liability. There is a risk management program designed and implemented to reduce workplace health and safety incidents, and to promote health and wellness in the workplace. The wellness and safety division falls under the risk management division and is robust in the department. All members of the department comply with this program and guidelines, to report accidents and injuries and to prevent them wherever possible. An independent occupational health and safety physician and physician assistants provides evaluation, support, analysis, reporting and communications to the risk management division.

The department has a wellness and fitness program for recruit and incumbent personnel and provisions for non-compliance by employees and members are written and communicated. The department has developed standard operating guidelines to provide a central core of directives to guide and direct the health and wellness program.

The department takes a proactive approach to physical fitness standards and all members have access to physical fitness equipment. Prospective employees must pass a CPAT prior to being tendered a job offer. Incumbent members are required to participate in either a physical fitness examination or a job related physical ability test. These tests are administered each year to ensure members are fit for duty.

The department offers initial medical evaluations for its members. The department requires a rehabilitative medical evaluation of members after an injury or significant illness to determine the eligibility of the member to return to full duty.

Due to budget constraints, the department cut the exercise physiologist. This was an essential position that monitored performance and coached members to maintain fitness and nutrition. It is recommended that the department hire an exercise physiologist that can educate, develop programs, monitor performance and coach members of the department to maintain fitness.

Category VIII — Training and Competency

The Montgomery County Fire Rescue Service operates a comprehensive full service training center recognized by the State of Maryland. The department operates as an accredited training review agency of the Maryland Fire Service Personnel Qualification Board, Inc., with full delegation of authority. The training academy is responsible for providing initial training to all new recruits in addition to continual in-service training for all career and volunteer service personnel. The training academy's initial training programs include firefighter I and II, emergency medical technician (EMT) and paramedic level training. Continual in-service training programs may be determined by the rank, the certification, the operational assignment of the employee, and/or objectives identified by the assistant chief of the training academy. The facility contains all of the resources and structures expected to be found in modern training facilities.

Staffing of the training academy includes the assistant chief, one battalion chief, four captains, two lieutenants, one master fire fighter, three civilian emergency medical services (EMS) nurse clinicians, and one civilian office services coordinator. Maryland certified fire service instructors from the operations division are utilized in an adjunct capacity to augment training programs.

A training and education program is established to support the agency's needs. Program areas and required training needs are identified based upon federal, state, and local laws, as well as administrative requirements. The division chief of safety, wellness and training, in conjunction with the assistant chief of training, meet semi-annually to identify the training needs of the agency and to identify the tasks, activities, knowledge, skills and abilities required for emergency operations. Course evaluations are utilized to assist in identifying the value and effectiveness of the training programs offered.

Training and education programs are provided to support the agency's needs. The training program is well organized and meets the needs of the department and its members. The department's programs also meet the state certification requirements. All members of the department meet the Firefighter Level II requirements of *National Fire Protection Association (NFPA) 1001: Standard for Fire Fighter Professional Qualifications* prior to the end of initial recruit training. The agency has several identifiable strengths within the training program. One of the main strengths is the established policies that ensure core competencies are exceeding the *Montgomery County Certification Standards for Training, Experience, and Credentialing Requirements Executive Regulation #36-08AM* and all congruent NFPA standards. This includes in-service training, field in-service training, annual re- certifications and National Board on Fire Service Professional Qualifications. Mandatory training and certification levels for personnel in all divisions are monitored and updates are provided to identify the training needs for department personnel.

The department utilizes a performance based evaluations to ensure the members and companies are competent and confident to perform the job. The department utilizes a combination of written and skill-based testing to evaluate individual performance, through company in-service, officer in-service, post incident analysis, annual departmental proficiency training and command officer training programs, to evaluate individual, company, crew and multi-company performance during the year. The training database maintains a repository of performance based training for each member of the agency.

Post incident analyses are also utilized to evaluate performance on the emergency scene. A recent analysis identified that the last several mayday calls were a direct result of floor collapse. A training program was initiated to assist firefighters in identifying this potential hazard before it occurs. In addition, a robust floor collapse training simulator was placed in service; 90 percent of the agency has participated in this training.

Training and education resources, printed and non-printed library materials, media equipment, facilities and staff are available in sufficient quantity, relevancy, diversity and they are current. Resources include training grounds sufficient for all varieties of firefighter, EMS and technical rescue training. The training center boasts: ample dedicated classrooms; video production and presentation areas; apparatus and simulators including floor collapse, flashover and emergency vehicle operations; and a command training center. The training facility has two engines, multiple ambulances for driver training, a transit bus, a mobile command post and several support vehicles to support the training needs of the agency.

Nationally recognized training materials are being used and all training is evaluated by the agency's fire chief and training chief semi-annually during the months of January and July. Program content is also evaluated to ensure compliance with local, state, regional and national requirements from

agencies that include the Maryland Fire and Rescue Institute, the Council of Governments, the NFPA and the Office of the Department of Homeland Security.

Category IX — Essential Resources

Criterion 9A – Water Supply

The Montgomery County Fire Rescue Service has an adequate water supply system that is well maintained. Inter-agency relationships assure that water supply requirements for firefighting are considered in planning processes. The water system has a number of built-in redundancies to assure reliable water sources for firefighting. There is a policy regarding water supplies in areas with and without fire hydrants within the department's safe structural firefighting operations guidelines.

The water supply resources available to the department are reliable and capable of distributing adequate volumes of water and pressures to all areas of agency responsibility. All areas meet fire flow requirements for emergencies. The Community Risk Reduction Services Section (CRRS) has regular contact with area water authorities to coordinate planning and construction of new additions to the water system. Additionally, CRRS personnel participate in regular meetings with water authority personnel to address management and business issues to assure that water supply needs are met.

Should the domestic water supply be rendered inoperable, the fire department is prepared to utilize mobile tankers and to draft from numerous sources of water that include, but are not limited to the rivers, tributaries, lakes and streams in the region. All first-due engines are outfitted with hard suction hoses for drafting. Responding crews have on-board mobile data computers to access hydrant information.

The fire protection area served by the department is supplied with a standard hydrant system with water supply sources from the Washington Suburban Sanitary Commission, the City of Rockville, and the Town of Poolesville, although none are interconnected to the Town of Poolesville water system. Approximately 80 percent of the county's residential, business and institutional customers are served by these fire hydrants.

The distribution system is normally adequate and well arranged with the exception of incomplete looping in some remote areas. There are plans to rectify this deficiency. In the short term, additional water for firefighting is available through mobile units having water tanks i.e., tankers, engines and brush trucks, or by drafting from bodies of water or other static water sources.

Criterion 9B – Communication Systems

The Montgomery County Fire and Rescue Emergency Communications Center (ECC) is located in the Public Safety Communications Center (PSCC) along with the: Montgomery County Police Communications Primary Public Safety Answering Point (PSAP); Traffic Management; Emergency Management; Emergency Operating Center (EOC); and the Department of Technology Services PSCC support component.

The ECC is responsible for the receipt of emergency and non-emergency fire and rescue and emergency medical services (EMS) calls for service in Montgomery County and for

telecommunications and dispatch services coordination of all fire and rescue related emergency events in Montgomery County.

There are 45 full time uniformed fire and rescue personnel who work a three day rotation consisting of one 24-hour day on duty and two 24-hour days off duty. There are also 10 civilian fire and rescue call takers in the ECC.

The public and the department have an adequate, effective and efficient emergency communications system. The system is reliable and able to meet the demands of major operations, including command and control within fire and rescue services during emergency operations, and meets the requirements of other public safety agencies having a need for the distribution of information.

The communications center is a modern, well equipped facility that is compliant with the *National Fire Protection Association (NFPA) 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems, 2010 Edition*. The center is staffed with well trained personnel who can perform all telecommunications functions.

Most department fire-rescue apparatus have a complement of portable radios, including one mobile radio. Portable radios remain with their assigned apparatus; radios are issued to one vehicle and are cross-referenced to a specific unit's stock number. Each fire and rescue provider assigned to an apparatus is provided a portable radio for use during operations.

The department operates with an 800 MHz radio system utilizing 20 conventional channels and over 300 talk groups. The Public Safety Systems Modernization (PSSM) project is underway to update the radio system with new subscriber units and radio infrastructure. Over $6.5 million was spent on new mobile and portable radio subscriber units in FY 2011. The new radios were purchased to enable compliance with re-banding of the 800 MHz frequency band. The PSSM project includes planned expenditures of over $51 million to modernize the 800 MHz radio system in FY12 through FY15. The department will most likely update the communication center within several years.

The department utilizes a communications manual in the ECC that serves as the governing document for all communications related issues. The center also distributes operational policies and general information bulletins to clarify policies, procedures and directives. In addition, training bulletins and other reference documents are published to provide educational information for personnel assigned to the ECC. The manual has been reviewed periodically and the latest revision was approved as county law in April 2006.

Criterion 9C – Administrative Support Services and Office Systems

The Montgomery County Fire Rescue Service provides most all of the office systems support to meet its needs. The department has sufficient but aging office equipment and furniture. Responsibilities for each of the internal systems reside within department divisions and are accompanied by policies and procedures for their governance and use. The department's staff members have developed new records management system (RMS) software to replace the existing incident reporting software, which is outdated and unsupported by the vendor.

Administrative support services and general office systems are in place with adequate staff to efficiently and effectively conduct and manage the department's administrative functions, such as

organizational planning and assessment, resource coordination, data analysis, research, records keeping, reporting, business communications, public interaction and purchasing.

The departments support services utilize a combination of uniformed and civilian personnel to provide a variety of functions, such as information technology, recruitment, procurement, fleet and facilities management, logistics and self-contained breathing apparatus (SCBA) repair. There have been gains in personnel for fleet management due to the centralization of services, but these personnel were simply transferred over from of other sections thereby increasing the overall administrative support services workload. However, the department has adequate clerical resources, records systems, business communications equipment, computers, workstations and other general office supplies to support the needs of the department. The administration members are a strong resource to the various functions and play a large part in the process of continuous improvement.

Category X — External Systems Relationships

Montgomery County Fire Rescue Service maintains relationships with outside agencies that support the fulfillment of its mission and increases operational effectiveness and efficiency. While the vast majority of these agreements are formal, there are some that are informal. Conflicts that arise are addressed most frequently through an informal process at the lowest effective level; often this level is that of the duty officer or battalion chief.

The department's operations and planning efforts include relationships with external agencies and operational systems that affect or may influence its mission, operations or cost effectiveness. The department enters into agreements to enhance services provided and received from parties and neighboring counties. As a member of the National Capital Region, the department supports the protection of the District of Columbia. The department has also entered into agreements with the Council of Governments (COG) and provides representation on a number of sub-committees as a part of the COG.

The department enters into and maintains relationships with outside agencies. An example of this is the Metropolitan Washington Council of Governments. This relationship is formal and is comprised of numerous committees and sub committees, which includes the Fire Chiefs' Committee that meets regularly to address matters pertaining to fire and rescue services. This committee also serves to advise groups such as the Emergency Preparedness Council, the Chief Administrative Officers and the Council of Governments Board of Directors.

The department has well-developed and functioning external agency agreements. The system is synergistic and is taking advantage of all operational and cost effective benefits that may be derived from external agency agreements. The department participates in written mutual aid agreements with all five federal fire departments located in Montgomery County. In addition to these written agreements the department also participates in several regional mutual aid plans including a regional emergency coordination plan and a mutual aid operations plan. These agreements support the department meeting its operational objectives the fulfillment of its mission.

The external agreements were found to be functional being entered into within the time period of 2005 – 2009. A review of the agreements found that the department would benefit from establishment of a process that mandates more frequent periodic reviews for all external agreements.

Documentation of that review would communicate their relevancy to those involved. Future agreements should consider including language supporting such a policy.

MCFRS

05/04/10